





ANNUAL REPORT  
OF THE  
**CITY ENGINEER**  
OF  
**TORONTO**  
FOR  
**1908**



TORONTO:  
THE CARSWELL CO., LIMITED, CITY PRINTERS, 19 DUNCAN, COR. ADELAIDE WEST  
1909



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R. Rossell  
T*ORONTO.

ANNUAL REPORT  
— O F T H E —  
CITY ENGINEER  
OF TORONTO FOR 1908.  
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# TORONTO

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**TOPOGRAPHY.**—The City of Toronto is situated upon the northern shore of Lake Ontario, about forty miles easterly of its western terminus. It lies in latitude  $43^{\circ} 39' 10''$  north, longitude  $79^{\circ} 23'$  west, on a plateau gently ascending north for a distance of  $3\frac{1}{2}$  miles, where an altitude of about 220 feet above the lake level is reached. It extends about eight miles along the lake, and is generally level, with slight depressions at points where minor water courses previously existed. The harbor is formed in front of the City by a sandy island, which lies to the south, at a distance of about a mile and a half.

Toronto is the capital of the Province of Ontario, and in it are situated the Provincial Parliament Buildings and Government House, the residence of the Lieutenant-Governor of the Province.

## STATISTICS.

**AREA.**—The area within the City limits, not including the portions of the City land covered by water, is about 24.38 square miles.

**POPULATION.**—The population of the City is about 315,000.

**PUBLIC STREETS AND LANES.**—Within the City limits there are 306.31 miles of streets and 95 miles of lanes, of which 234.36 miles are paved, and 71.95 miles unpaved.

### PAVEMENTS AND ROADWAYS.—

Asphalt.....	101.07	miles
Asphalt block .....	0.97	"
Cedar block.....	24.77	"
Brick .....	23.90	"
Macadam .....	44.16	"
Wood on concrete.....	0.45	"
Stone and scoria block.....	2.36	"

PAVEMENTS AND ROADWAYS.—*Continued.*

Gravel .....	13.65	miles.
Bitulithic .....	15.66	"
Tar macadam.....	5.71	"
Concrete pavements .....	1.56	"
Unpaved roadways.....	71.95	"

## SIDEWALKS.—

Stone flag.....	1.821	miles
Concrete.....	340.919	"
Brick .....	3.366	"
Wood .....	80.00	"

SEWERAGE.—The City is drained by what is known as the combined system of sewers, and there are 275.01 miles of sewers.

WATER WORKS.—The Water Works system is owned and operated by the City, the supply being obtained from Lake Ontario through a 6-ft. steel conduit laid across Toronto Island to the south tunnel shaft near Hanlan's Point, and from thence through a tunnel 8 ft. 4 in. in diam., laid under Toronto Bay to the Main Pumping Station on the water front, the water being pumped through the City mains, the surplus going to the Reservoir situated north of the north City limits. Cost of system to date, about \$6,000,000.

## STATIONS AND ENGINES.—

*Main Pumping Station.*

No. 1 Engine,	4,000,000	gals. capacity,	24 hours	
" 2 "	8,000,000	"	"	"
" 4 "	10,000,000	"	"	"
" 5 "	10,000,000	"	"	"
" 6 "	15,000,000	"	"	"
" 7 "	15,000,000	"	under construction.	

*High Level Pumping Station.*—Two engines with a total capacity of 6,000,000 gallons in 24 hours, and one 6,000,000 gallon engine under construction

*Island Pumping Station.*—One engine 500,000 gallons capacity and one engine of 1,000,000 gallons capacity in 24 hours.

323.743 miles of water mains.

65,303 water services.

3,725 street hydrants.

3,164 valves.

2,768 meters in use.

WATER RATES.—Average schedule,  $3\frac{3}{4}$  cents per 1,000 gallons, and by meter,  $10\frac{1}{2}$  cents per 1,000 gallons.

60,000 water takers.

Pressure—Domestic and fire 50 to 90 lbs.

Average quantity pumped in 24 hours, 29,232,449 gallons.

Water consumed annually, 10,704,829,147 gallons.

Fuel used—soft coal screenings.

Cost of fuel during 1908, \$49,226.46.

General receipts, constructing and moving services, etc.	\$ 2,792 45
Revenue collected in 1908 by schedule rate.....	241,356 50
"      "      "      meter rate .....	232,342 56
Charges made against different branches of City service for water used.....	86,511 69
Total.....	<u>\$563,003 20</u>

Operating expenses, including cost of collecting rates and debt charges.....	\$ 563,511 81
House services, pipe laying and renewals .....	5,541 04
Total.....	<u>\$ 569,052 85</u>

#### FIRE PROTECTION.—

A thoroughly efficient High Pressure System, pumping into independent water mains, capable of giving a fire pressure on the

---

same of 300 lbs. to the square inch, has been installed for the protection of the congested and manufacturing districts of the City.

254 officers and men in brigade.

96 horses.

80 pieces of apparatus for various purposes.

3,725 fire hydrants.

21 fire stations.

9 steam fire engines and 3 chemical engines.

#### POLICE PROTECTION.—

422 officers and men.

1 squad of 11 mounted men, 1 patrol sergeant and 1 inspector.

4 patrol wagons.

1 prison van.

1 headquarters and 9 stations.

125 patrol signal boxes.

MILITARY.—There are two regular corps stationed in the City (one mounted and one infantry), at Stanley Barracks, near the site of old Fort Rouille, and five militia corps (two mounted and three infantry), all of which have first class bands and the use of well-equipped and commodious Armouries.

LIGHTING.—There are 3 lighting companies doing business in the City. The Consumers' Gas Co. have 361 miles of mains, and 53,368 consumers, and supply gas for 1,063 street lights. Toronto Electric Light Company have 1,518 street electric arc lights, 1,200 private business arc lights, about 300,000 private business incandescent electric lights, and also 1,200 miles of overhead and underground wire, and 80 miles of underground conduit.

TELEPHONE AND TELEGRAPH SERVICE.—The Bell Telephone Company is the only company doing business in the City. They have 26,000 telephones in use, 28,000 miles of overhead, 55,000 miles of underground wires, 30 miles of underground conduit, and 225 miles of ducts.

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There are two telegraph companies doing business in the City, the Great North-Western Telegraph Company, with 70 sets of instruments and 260 miles of overhead wires; and the Canadian Pacific Railway Telegraph Company.

**PUBLIC PARKS.**—The Public Parks of the City are under the control of the City Council. There are 40 public parks, having a total area of about  $1,640\frac{1}{4}$  acres.

**EDUCATION.**—The educational system is under the direction of the Board of Education and the Separate School Board. There are 68 public schools, having a total of 782 rooms, with a staff of 841 principals and teachers. Four collegiate institutes, 3 high schools and 1 technical high school, having a total of 89 class rooms, with a staff of 116 principals and teachers.

Eighteen separate schools, with a staff of 99 principals and teachers.

- 2 Industrial Schools (Protestant).
- 1 Industrial School (R. C.)
- 30 Colleges, Seminaries and Pay Schools.
- 1 Technical School.
- 5 Universities.
- 3 Cathedrals of all denominations.
- 228 Churches of all denominations.
- 7 Synagogues and several Jewish Churches.
- 48 Missions.
- 5 Mission Training Schools.
- 9 Convents.

**PUBLIC LIBRARIES.**—There is a Reference Library of 75,000 volumes in the finest library building in Canada, erected through the generosity of Mr. Andrew Carnegie; a main Circulating Public Library, and five Branch Circulating Libraries, all under the control of the Public Library Board. In these Circulating Libraries there are about 75,000 volumes and the yearly circulation is about 500,000 volumes.

## PUBLIC INSTITUTIONS.—

- 62 Hospitals, Asylums and Public Homes.
- 3 Institutions for destitute and criminal classes.

Law.—Toronto is the centre of the Law System of the Province of Ontario, having 27 Law Courts within its limits.

## AMUSEMENTS.—

- 8 Theatres
- 42 Music, Concert Halls and Vaudeville Houses.
- Zoological Gardens.
- 238 Public Buildings, Halls, etc.

## PUBLIC ACCOMMODATION.—

- 184 Hotels.
- 3,200 Boarding Houses.

RAILWAYS.—There are three railway companies whose systems enter Toronto, namely, the Grand Trunk Railway, with about 90 miles of track laid in the City limits.

The Canadian Pacific Railway Company, with about 36 miles of track laid in the City limits.

The Canadian Northern Railway.

109 Passenger trains enter and leave the City daily.

195 Freight trains enter and leave the City daily.

The Toronto Railway Company has the exclusive franchise for operating a street railway system within the City limits. They have 107.24 miles of tracks on the streets and 7.42 miles in the sheds, etc.; about 163 motors and 167 trailers in operation, and carried during 1908 a total of 121,840,147 passengers, of which 89,139,571 were paid passengers, and 32,700,576 were transfers. \$2,936,259.57 were received by the Company from the sale of tickets during the year, and the revenue derived by the City from the Company was \$578,994.56, for 1908.

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**BUSINESS.—**

6 daily newspapers ; 49 weekly ; 20 semi-monthly ; 76 monthly and 8 quarterly newspapers and periodicals ; 2 directory companies.

5 Public markets.

36 Banks, not including branches.

1,450 Factories and manufactorys.

396 Wholesale houses.

8 Departmental stores.

7,800 Miscellaneous business companies, corporations and stores.

**SANITATION.—**

*Street Cleaning, Watering and Scavenging.*—A modern and complete system of street cleaning, watering and scavenging is owned and operated by the city.

The supervision of the sanitary requirements of the City is under the control of the Local Board of Health.

The foregoing brief review of Toronto is annually compiled by

GEO. J. CASTLE,  
*Secretary to City Engineer*

**PAST CITY ENGINEERS OF TORONTO.—**

1840-1842, Thomas Young.

1843-1852, John G. Howard.

1853, William Thomas.

1854, John G. Howard.

1855, William Kingsford.

1856, Thomas H. Harrison.

1857-1858, Thomas Booth.

1859-1860, Alfred Brunel.

1861-1870, J. H. Bennett.

1871-Oct., 1875, Chas. W. Johnston.

Oct. 1875-July, 1880, Frank Shanly.

Sept. 1880-July, 1883, R. J. Brough.

Oct. 1883-1889, Charles Sproatt.

1890-Sept., 1891, W. T. Jennings.

Sept. 1891-May, 1892, Granville C. Cunningham.

May, 1892-Jan., 1898, E. H. Keating.



ANNUAL REPORT  
OF THE  
CITY ENGINEER  
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CITY OF TORONTO  
FOR THE YEAR 1908

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CITY ENGINEER'S OFFICE,  
Toronto, December 31st, 1908.

*To His Worship the Mayor and Members of the Council of the Corporation of the City of Toronto:*

GENTLEMEN,—In compliance with By-law No. 2534, I have the honor to lay before you the Annual Report of the Department for the year ending 31st December, 1908, setting forth the various works carried out during the year, with details of cost of construction, and suggestions and recommendations as to new works and improvements required.

OFFICIAL STAFF.

City Engineer and Chief Engineer and Manager of the Water Works .....	Chas. H. Rust, M. Can. Soc. C.E., M. Am. Soc. C.E.
Deputy City Engineer .....	C. L. Fellowes, M. Can. Soc. C.E.
Engineer in charge of Electrical Department ..	K. L. Aitken, A. M. Soc. C.E.
Asst. Engineer in charge of Bridges .....	John Williams, M. Can. Soc. C.E.
Asst. Engineer in charge of Sewers.....	J. D. Shields.
Asst. Engineer in charge of Roadways, outside work .....	G. G. Powell, A. M. Can. Soc. C.E.
Asst. Engineer in charge of Roadways, Office work.....	M. A. Stewart.
Asst. Engineer in charge of Main Drainage work .....	A. C. D. Blanchard, A. M. Soc. C. E.
Asst. Engineer in charge of Main Drainage work	F. W. Thorold.
Accountant .....	Wm. McCartney.
Secretary Committee on Works .....	A. H. Clarke.
Secretary to City Engineer.....	Geo. J. Castle.

Chief Clerk..... H. M. Berryman.  
 Chief Engineer Main Pumping Station..... Alex. McRae.  
 Chief Engineer High Level Pumping Station... Thos. Walsh.

#### FINANCIAL.

During the year just closed the amount of money expended and the work carried out exceeds any previous year, and I am pleased to point out to your Council that most of the work has been of a permanent character.

The total expenditure of the Department, including Water Works, amounted to \$3,074,023.55, which was divided as follows:

Water Works .....	\$933,249	63
General and special work .....	809,712	31
Street Railway track allowance pavements....	19,231	79
Local Improvements .....	1,296,015	37
Island Works .....	15,814	45
<hr/>		
Total .....	\$3,074,023	55

This is the largest amount expended by this Department in any one year, being an increase of \$594,915.99, or nearly 26% over 1907.

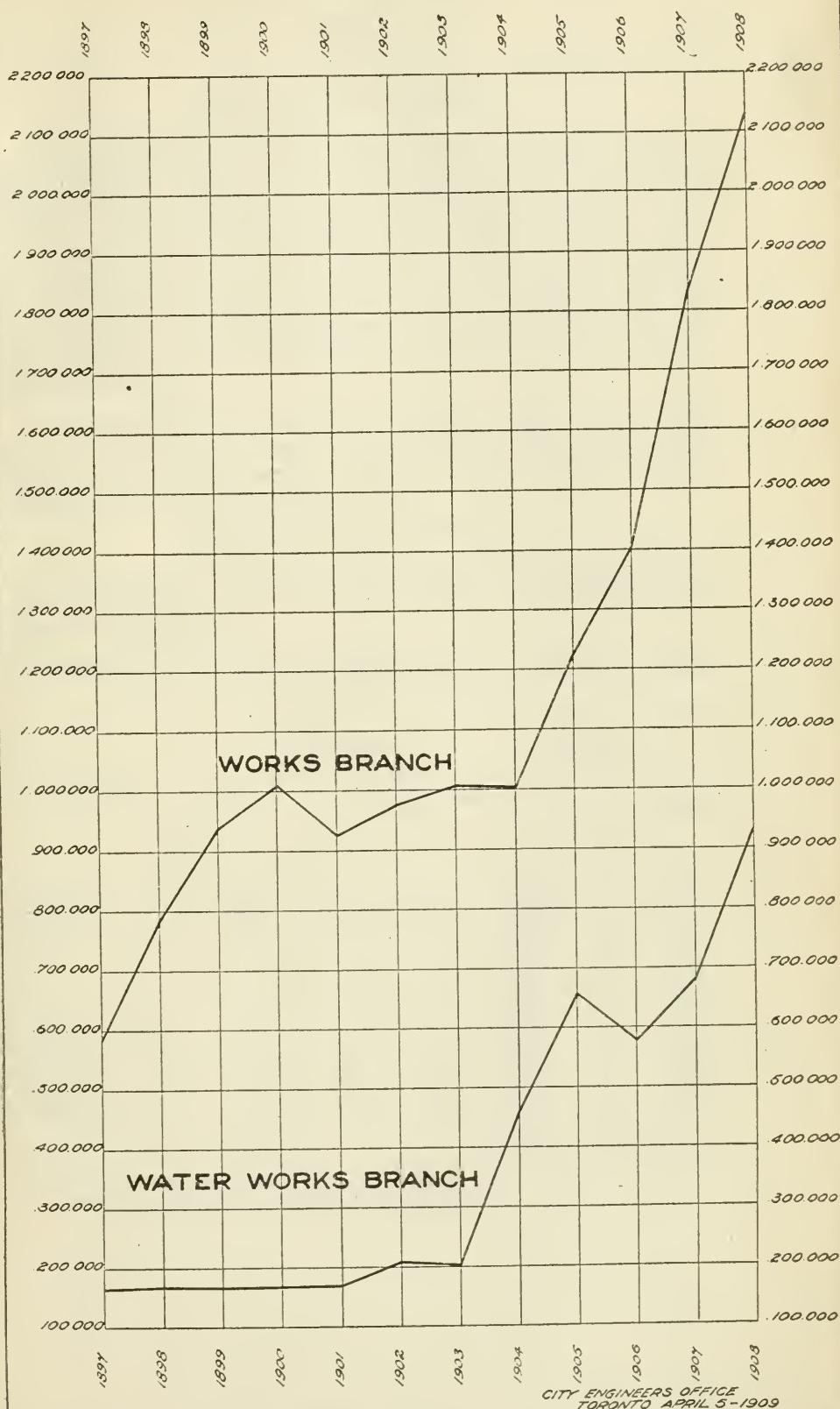
Expenditure upon Local Improvements was divided as follows:

Roadways .....	\$809,965	05
Sidewalks .....	267,006	51
Curbs .....	26,146	80
Sewers .....	119,504	22
Street openings, extensions, etc. ....	73,392	79
<hr/>		
Total.....	\$1,296,015	37

#### GROWTH OF CITY.

During the year 778.4 acres have been added to the area of the City by the annexation of East Toronto and Deer Park. The applications for annexation to the City, of Wychwood, Bracondale, and that portion of East York lying between Greenwoods Avenue and East Toronto have been postponed for a short time. These districts and West Toronto will no doubt be joined to the City during the coming year. With the exception of West Toronto, there has been very little improvement work done in these districts, and a large number of new roadways, sidewalks, sewers, water-mains, etc., will be required. This will add very considerably to the work of this Department.

# DIAGRAM OF EXPENDITURE





## STREET RAILWAY MATTERS.

Very little progress has been made towards relieving the congestion which now exists during the rush hours, owing to the City and the Street Railway Company failing to agree upon what new routes should be constructed. The Company are willing to build certain extensions in the down town districts, but are not prepared to consider any other extensions until these lines are constructed. This did not meet with the approval of the City Council, and the matter was brought before the Ontario Railway and Municipal Board, and a decision was handed down in favor of the Company, but pending an appeal by the City no further action can be taken.

It is very regrettable that two corporations which are so closely interested in trying to obtain a good street railway service cannot reach an amicable arrangement, as it inflicts a great deal of unnecessary hardships upon the citizens using the cars.

## TEMPERATURE AND RAINFALL.

Through the courtesy of Mr. R. F. Stupart, Director of the Meteorological Department, a table is attached showing the temperature and rainfall during the year:

## STATEMENT OF MONTHLY TEMPERATURE AND PRECIPITATION AT TORONTO FOR 1908.

Month.	Temperature.			Precipitation.		
	Mean.	Max.	Min.	Rain.	Snow.	Total.
January.....	23.9	41.3	-14.2	0.610	19.0	2.510
February.....	18.7	44.9	-17.4	1.170	26.1	3.780
March.....	31.1	62.9	9.0	0.920	6.2	1.540
April.....	41.8	75.3	17.5	1.725	6.0	2.325
May.....	56.2	84.0	29.4	4.630	0.1	4.640
June.....	66.0	86.9	44.0	2.970	.....	2.970
July.....	70.4	91.5	52.9	2.930	.....	2.930
August.....	66.6	90.4	44.1	2.830	.....	2.830
September.....	62.9	86.1	37.9	1.295	.....	1.295
October.....	50.4	76.9	28.2	1.010	*	1.010
November.....	39.6	62.7	23.0	1.240	3.7	1.610
December.....	28.5	49.3	6.0	0.390	16.7	2.060
Year.....	46.3			21.720	77.8	29.500

NOTE.—Ten inches of snow equals one inch of rain.

RECORD OF RAINFALL AT RESERVOIR GROUNDS FOR  
THE YEAR 1908.

Day.		Jan.	Feb.	March	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1st.					0.16								
2nd.													
3rd.													
4th.	0.02							0.15	0.02				
5th.									1.52				
6th.			0.35	0.15									
7th.								0.38		0.09			
8th.				0.30	1.26							0.10	
9th.					0.04							0.03	
10th.													
11th.												0.26	0.75
12th.	0.46								0.54				
13th.			0.03					0.03	0.13				
14th.			0.33		0.49	0.05							
15th.		1.06		0.09									0.04
16th.					0.19								
17th.								1.05	0.48				
18th.								0.81					
19th.				0.42		0.34		0.06	0.01				
20th.					0.22								
21st.					0.05	0.16	0.25						
22nd.				0.33									
23rd.							0.17						
24th.			0.14			1.45				0.37			
25th.				0.30								0.78	
26th.					0.26								
27th.													
28th.			0.49	0.05					1.03	0.42			
29th.					0.27	0.69							
30th.				0.22	0.35						0.21	0.56	
31st.					1.03								
	0.48	1.06	1.34	2.02	4.16	2.86	2.67	2.75	1.04	0.88	1.38	1.35	=21.99

RECORD OF SNOWFALL AT RESERVOIR GROUNDS FOR  
THE YEAR 1908.

Day.	Jan. in.	Feb. in.	March in.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov. in.	Dec. in.
1st.....	6 $\frac{2}{3}$											
2nd.....		2 $\frac{1}{4}$										
3rd.....												
4th.....												
5th.....												
6th.....	10 $\frac{3}{4}$	4 $\frac{3}{4}$										
7th.....												
8th.....												
9th.....												
10th.....		1										
11th.....												
12th.....	3											
13th.....											2 $\frac{1}{4}$	
14th.....												
15th.....											2 $\frac{1}{4}$	
16th.....											4 $\frac{1}{4}$	
17th.....												
18th.....												
19th.....												
20th.....												
21st.....												
22nd.....												
23rd.....	4 $\frac{1}{2}$	1										
24th.....												
25th.....												
26th.....	4	1 $\frac{3}{4}$										
27th.....												
28th.....												
29th.....												
30th.....												
31st.....												
	12	21 $\frac{1}{2}$	6								2 $\frac{1}{2}$	11
												= 53 $\frac{5}{7}$

---

### ELECTRICAL DISTRIBUTION SYSTEM.

The sum of \$2,750,000 has been appropriated for this work, and, with the approval of the Council, Mr. K. L. Aitken, an electrical engineer of Toronto, was appointed to take charge of this branch of the Department. Mr. Aitken has been, up to the present, dealing with an entrance for the transmission line, locating main transformer stations, and considering the system of power and light distribution to be used. These points are now practically settled and specifications are being prepared and tenders will be called for early next year.

Under the contract with the Hydro-Electric Commission the City is to pay \$18.10 per H. P. for ten thousand horse power, but so far the Commission have been able to purchase their equipment at a lower figure than their estimates, which will reduce the price to be paid by the City accordingly.

### LAKE LEVEL.

During 1908 the lake level rose to nearly 45 inches above zero. The highest record was in 1870, when it was 47 inches above zero. This unusually high water did considerable damage at the Island, flooding the lots and gardens of the residents, and also the Park, to such an extent that the Park was practically useless during a considerable portion of the season. Owing to the extreme high water the City had one of its sand pumps almost continuously employed during the earlier part of the season in filling in the lots of the residents, for which the owners paid the actual cost of the work. Whilst the high water was the cause of a great deal of trouble, it was not an unmixed evil, as a considerable portion of the Island has been raised to such a height that no further trouble of this character need be anticipated.

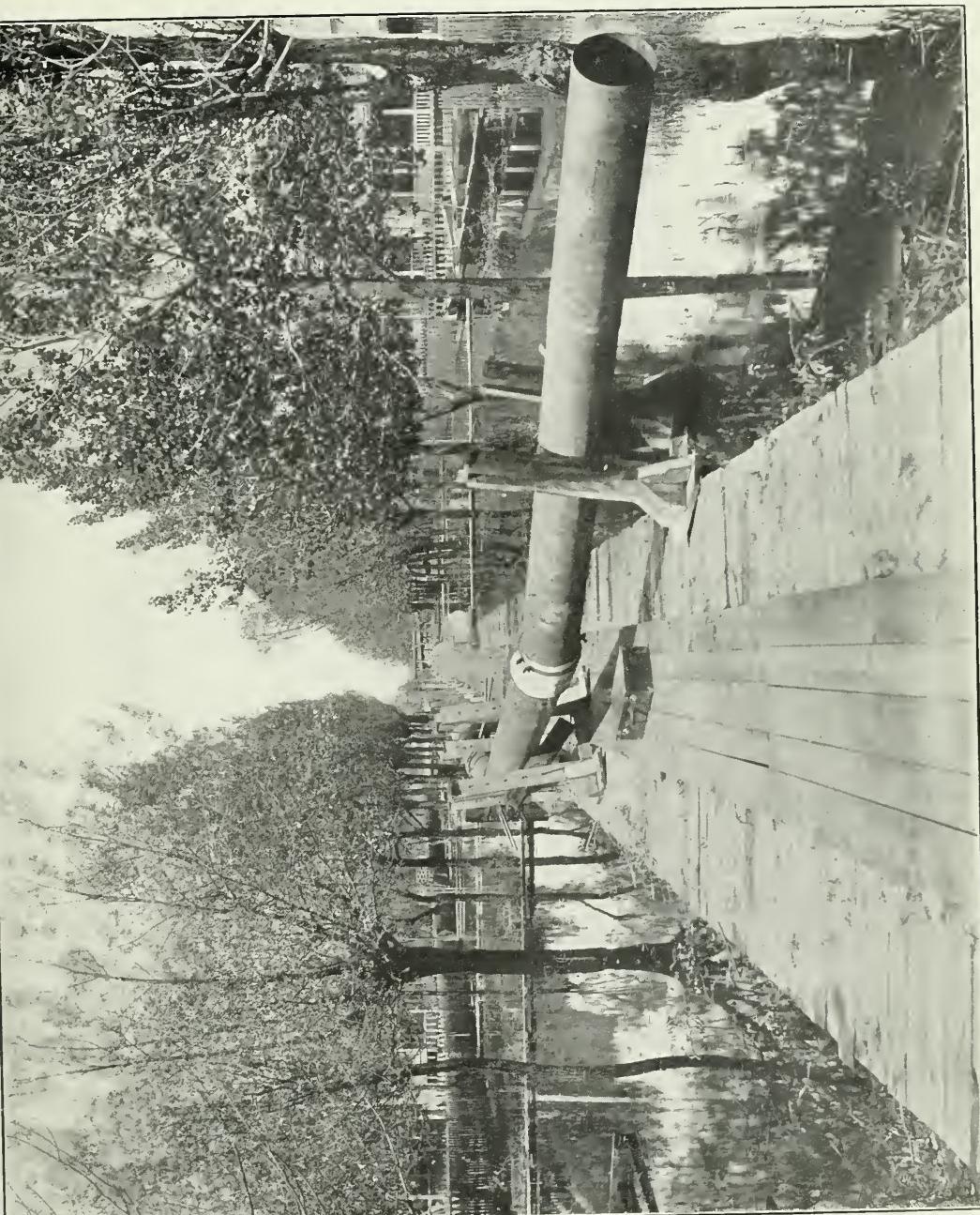
### WATER WORKS.

#### FINANCIAL.

The total expenditure for the year of the portion of the Water Works Department, which is under the control of the City Engineer, amounted to \$933,249.63, divided as follows:

Maintenance .....	\$213,690	18
Construction .....	58,904	19
Renewals .....	7,739	33
Special Works .....	602,266	24
Revenue Mains .....	50,649	69

HIGH WATER, TORONTO ISLAND, ST. ANDREW'S AVE.





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The expenditure of the Revenue and Collection Branch under the control of the City Treasurer amounted to \$560,210.75.

#### DISTRIBUTION.

97,289 feet of mains of various sizes have been laid during the past year. This is very much in excess of the amount laid the preceding year. The total length of mains in use in the City is 323.743 miles.

#### HOUSE SERVICES.

The number of house services laid during the year was 3,641.

#### LEAKS ON MAINS.

There were 217 leaks on the mains, and the cost of repairing averaged \$10.44 per leak. The average number of leaks per mile of distribution is 0.669, and the average cost per mile is \$6.99.

#### RESERVOIR.

The average depth of water in the reservoir was 16 ft. 7 in., equal to an elevation of 212 ft. 7 in. above zero level of Lake Ontario. At this level the reservoir contains 24,470,821 imperial gallons of water.

Unfortunately the reservoir could not be spared for cleaning again this year, owing to the difficulty of keeping up the supply of water in the mains.

#### TEMPERATURE OF WATER.

The average temperature for the year taken at the City Hall tap was 44.58 degrees, Fahrenheit. The highest temperature was 64 degrees, Fahrenheit, on the 21st of September, and the lowest 35 degrees Fahrenheit, on the 21st of March.

#### HIGH LEVEL PUMPING STATION.

The John McDougall Caledonian Iron Works Company, to whom were awarded the contract for the new six million gallon engine, which should have been in place during 1907, have only completed their contract late in this year, and the engine was turned over for the first time on the 21st of November, 1908, and has not as yet been taken out of the contractors' hands. The contract price was \$43,947.

A contract has also been made with the John Inglis Company and the City for the construction and erection of a duplicate six million

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triple expansion pumping engine, and the progress on this engine has been very satisfactory.

#### MAIN PUMPING STATION.

The average daily pumping was 29,097,054, being an increase of 722,953 gallons over previous year.

#### HIGH PRESSURE FIRE SYSTEM.

Three hundred acres are served by this system, and the total length of mains is 45,241 feet, on which are located 146 hydrants. The whole of the pipes, valves and hydrants were tested at 450 pounds to the square inch, after being placed in the ground. All special connections are of cast steel, and pipe connections between mains and hydrants are of flanged steel. Air valves are placed at all high points on the mains.

In order to operate this system an addition was built to the main pumping station at the foot of John Street, and two 1,000 horse-power Westinghouse-Parsons horizontal steam turbines direct connected to two 2-stage five million gallon turbine pumps. The condensers in the engine room are of the Barometric type, the vacuum obtained being 27 in., City pressure being used for this purpose.

The maximum pressure used on the mains for fire purposes is 300 pounds per square inch. The speed of the turbines while maintaining this pressure and delivering five million gallons per twenty-four hours is 1,500 revolutions per minute.

On December 28th a test was made of the system by the Engineer of the Fire Underwriters' Association and was very satisfactory.

#### TUNNEL.

The contract for this work was awarded in the early part of 1905, and the amount of same was \$269,000. The work was finally completed on the 31st of December of this year, and the water let into the tunnel on the following day. The tunnel is a total length of 5,087 feet. A complete description of this work is given in the report of the Deputy City Engineer, who had charge of this contract.

#### WATER FILTRATION.

In May of this year a deputation composed of Mr. Controller Harrison, Dr. Sheard and Mr. C. L. Fellowes, Deputy City Engineer, visited Philadelphia and other cities in the United States where extensive plants

have been recently installed and efficiently operated, and as a result recommended to the City Council that Mr. Allen Hazen, of New York, be engaged to prepare plans for a filtration plant for this City. Mr. Hazen is now engaged upon this work and we expect to call for tenders early in the coming year.

#### HYDRAULIC DREDGE No. 3.

During the year an additional dredge known as No. 3, was constructed for the Corporation by the Polson Iron Works Company, of Toronto. The contract price was \$60,000, an additional \$15,000 being spent on pipes and pontoons.

The dredge is a hydraulic one and is capable of excavating any ordinary material, such as sand, clay, gravel, earth or mud, to a depth of 18 feet, and to make a cut 100 feet wide and deliver the same 1,200 feet from the dredge. The nominal capacity of the dredge is 250 cubic yards of material per hour, but this will vary more or less, depending on the conditions and kind of material the dredge may be operating in. The hull is of steel, with the exception of the deck, which is laid with Douglas fir planking, 4 inches wide. The length of the hull is 110 feet, by 30 feet beam, and has a moulded depth of 7 feet 8 inches at the side.

The main engines are of the triple expansion marine type, capable of developing 240 I. H. P. when turning up 250 revolutions per minute, with 160 pounds steam pressure on the boiler. The engines are direct connected with the main pump, which is of the centrifugal type, having an enclosed cast steel runner and a heavy cast iron shell. The cutter is of the rotary type and is a steel casting 4 feet 6 inches diameter, by 3 feet 6 inches long, having five cutter arms cast solid with the hub.

The forward hoisting engine is placed on the main deck near the bow. This engine operates the hoisting drum placed in the centre of the hull for raising and lowering the suction pipe. It also drives the cutter head. The dredge is controlled from the pilot house.

At the after end are placed two wooden spuds, which are raised and lowered by means of a double friction drum-hoisting engine. The other auxiliaries consist of independent air pump and jet condenser, one feed and one pony pump. There is also a complete electric light plant furnished by the Canadian Westinghouse Company, Limited, including two search lights.

Steam is supplied for all machinery by a Clyde boiler 10 feet in diameter by 12 feet long. There is also an auxiliary boiler, vertical type, to supply steam to the heating system during cold weather. This boiler is also used to supply steam to the pony pump when the main boiler is being washed out.

The quarters for the crew are very complete and commodious, including a bath room and general smoking and reading room. There are also two hand-derrick cranes, which have a lifting capacity of five tons.

Sand Pump No. 3 was constructed for the improvement of Ashbridge's Bay, and was put into commission in July, and was engaged a great deal of the time in pumping sand into that district, the sand being obtained from Messrs. R. Weddell & Co., contractors for the new western channel.

#### DREDGES Nos. 1 AND 2.

These dredges were engaged at the Island during the early part of the season in filling up low lands which were flooded owing to the very high water this year. A great deal of this work was paid for by the property owners whose lots had to be filled.

#### ROADWAYS AND SIDEWALKS.

The total number of works undertaken and carried out by this branch of the Department during the year was 805. This is an increase over the preceding year of 104.

A summary of the works is as follows:

Carried over from 1907 .....	86
Contract works .....	564
Day labor works .....	174
Private permanent works .....	67
<hr/>	
Total works undertaken .....	805

The work done includes the construction of 40.326 miles of pavements and 55.416 miles of permanent sidewalks. In addition to this there was also constructed 15.424 miles of concrete curbing.

Asphalt again proved to be the largest factor of the year's paving work, 21.031 miles being laid.

The system of doing work by day labor, which was introduced some years ago, and by which the City Engineer tenders in competition with

**DIAGRAM SHEWING FLUCTUATIONS OF PAVEMENTS  
1896 - 1908**

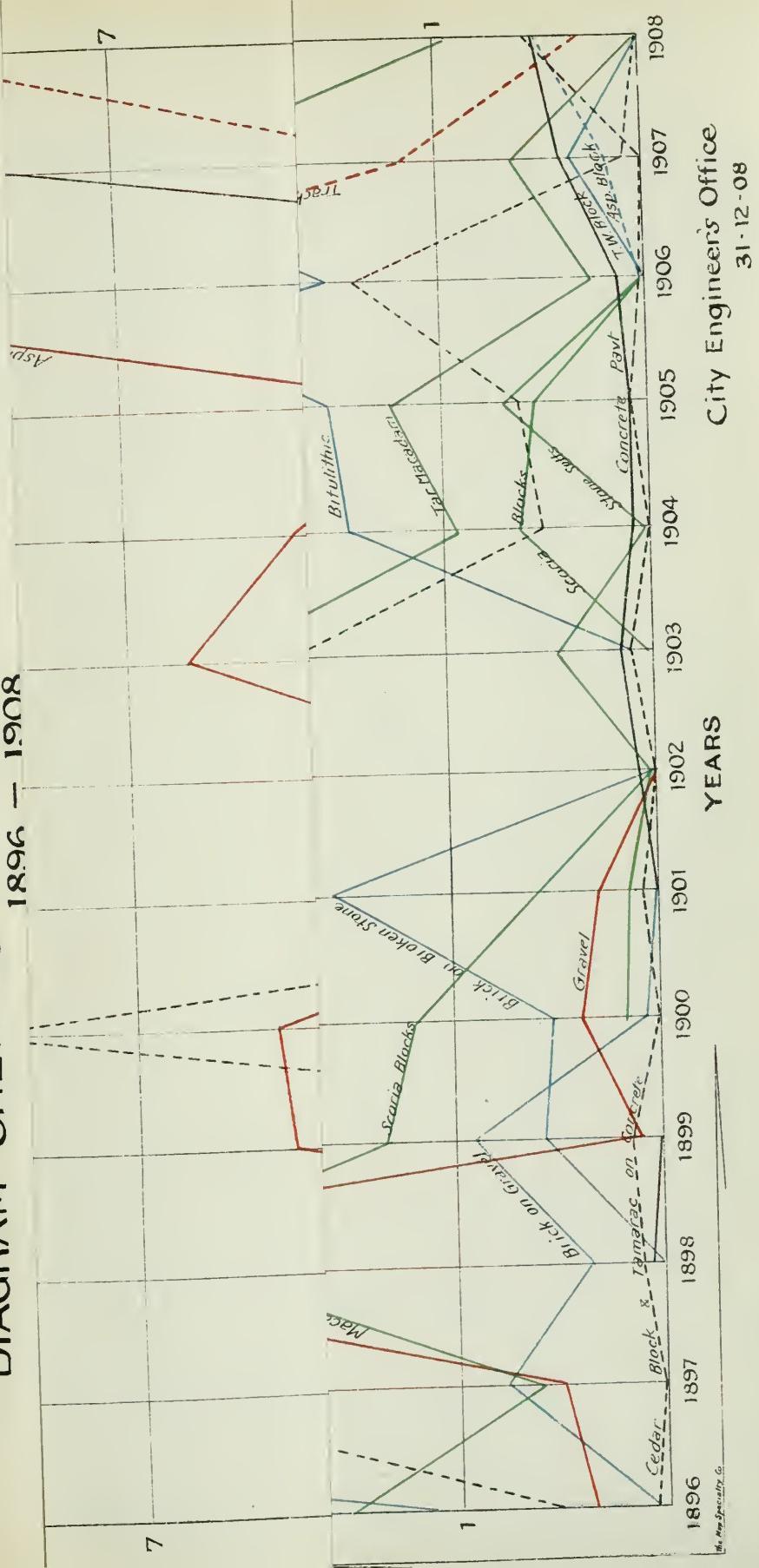
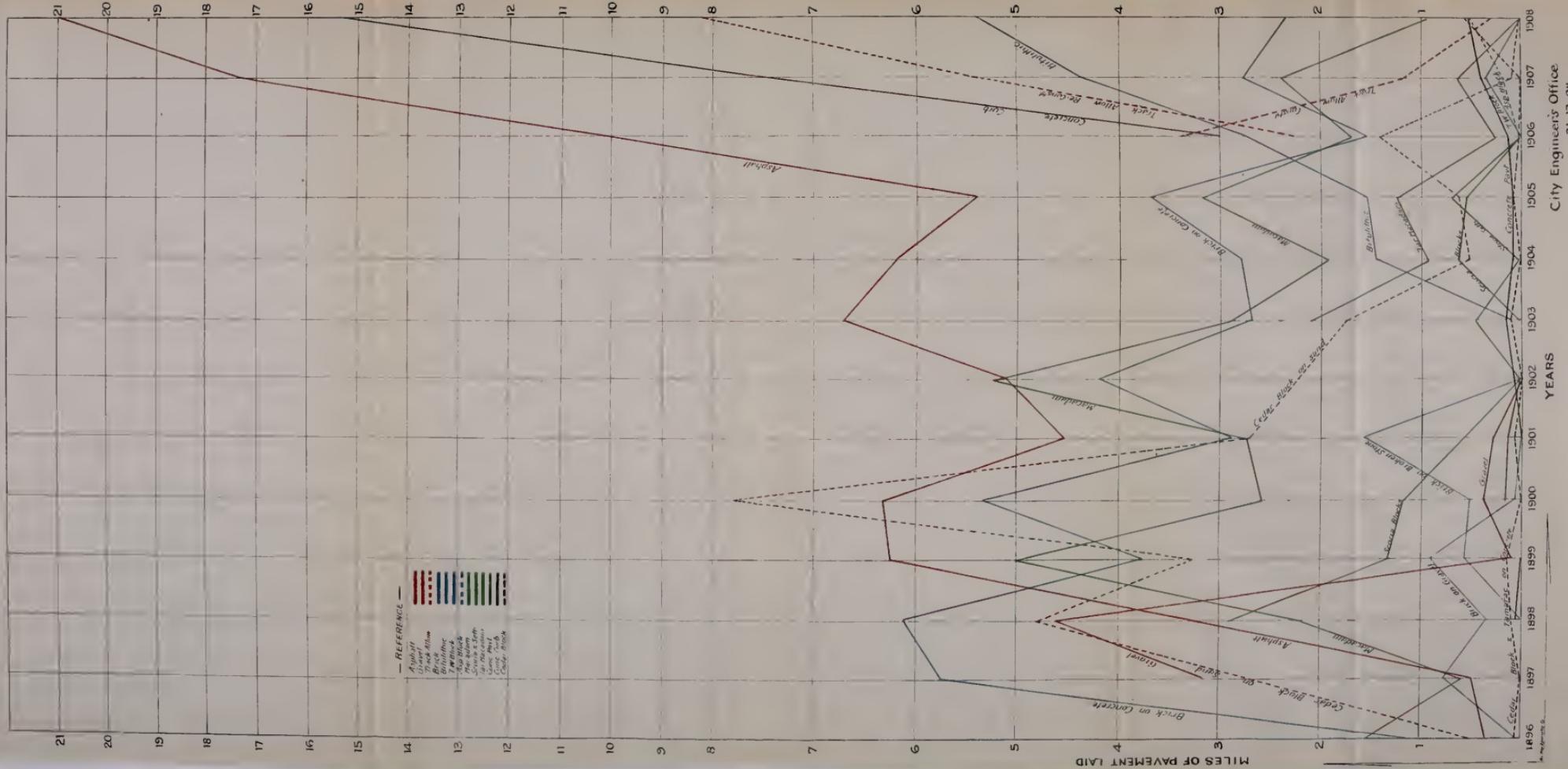


DIAGRAM SHEWING FLUCTUATIONS OF PAVEMENTS  
1896 - 1908

FLUCTUATION



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contractors, was continued during the year, and a considerable saving was effected to the property owners, viz., \$32,800.87.

I would suggest that your Council consider the advisability of further extending this system. By the expenditure of about \$75,000 for an adequate plant, including the purchase of a stone quarry, sand and gravel pits and an additional asphalt plant, the City would be placed in a very good position to do this work, and I am satisfied a considerable saving to the citizens would result. Details of this work are given more fully in the report of the Assistant Engineer in charge of this work.

By looking at the tables contained in the Assistant Engineer's report, it will be seen that the mileage of roadways of a permanent nature is very much increased, whilst such pavements as macadam and cedar block have made no gain.

The first pavement laid under the local improvement system was constructed during the year 1881, and the annual variation in the mileage of paved and unpaved streets, with a classification of the same up to the end of 1908, is shown in a table attached to the Assistant Engineer's report.

In connection with asphalt pavements, they have been divided into two types, light and heavy, and in some cases a light asphalt pavement has been used where a heavier type would probably have given better results. It has, therefore, been decided to establish a medium class of pavement, having a two-inch surface, one-inch binder and five-inch concrete foundation. The table in the report of the Assistant Engineer gives the average cost of asphalt pavements from 1901 up to the present time.

In 1901 the average cost of heavy asphalt was \$2.54 6-10; light asphalt, \$2.04 $\frac{1}{2}$  per square yard. In 1908 the average price of heavy asphalt was \$2.15 $\frac{2}{3}$ , and light asphalt \$1.51 2-5 per square yard.

During the year this Department constructed by day labor about nineteen asphalt pavements, or a length of 2.48 miles. In addition to this work 49,965 square yards of repairs were made upon pavements which are out of guarantee. The average cost per square yard of repairs was 52 cents. This price includes allowance for maintenance of plant, etc. The price paid in 1907 for this class of work by contract was 76 cents per square yard. This shows a total saving to the City of \$9,536.40, which is very good interest on an investment of \$30,000 for a plant.

A number of the large cities are now reducing the period of guarantee upon asphalt pavements from ten to five years, and in a great many cases even to one year. This long period of guarantee was exacted when very little was known as to the suitability of asphalt for street paving purposes. Recently all large municipalities have attached to their staff a chemist and in addition a well equipped laboratory, which is the case with this City. The shortening of this guarantee period will no doubt result in reducing the cost of most of our pavements and will also, I think, have a tendency to produce more competition. There are at present a number of contractors, and especially large corporations, who are very loathe to allow a large amount of their capital to be locked up for so long a period as ten years.

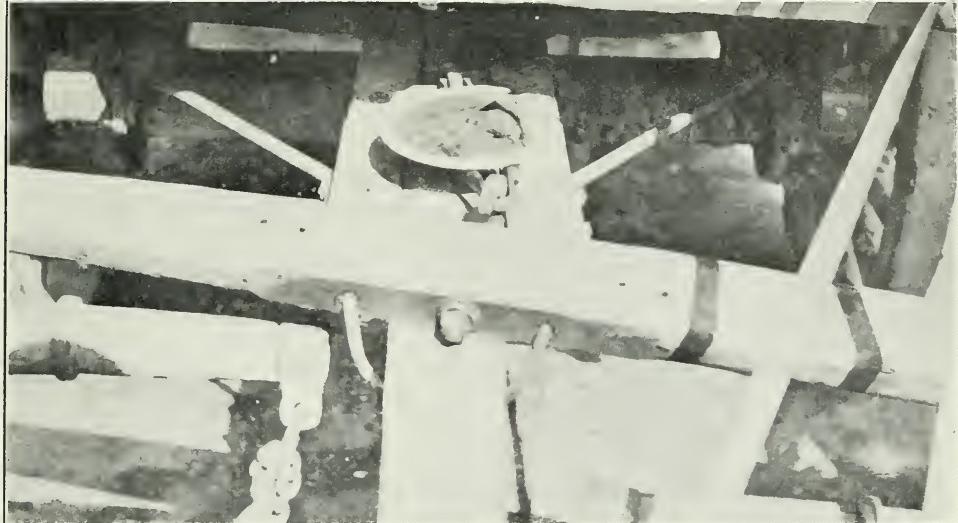
I would recommend that the guarantee be reduced from ten to five years on asphalt, bitulithic, granite setts, vitrified and wooden block pavements.

#### BITULITHIC.

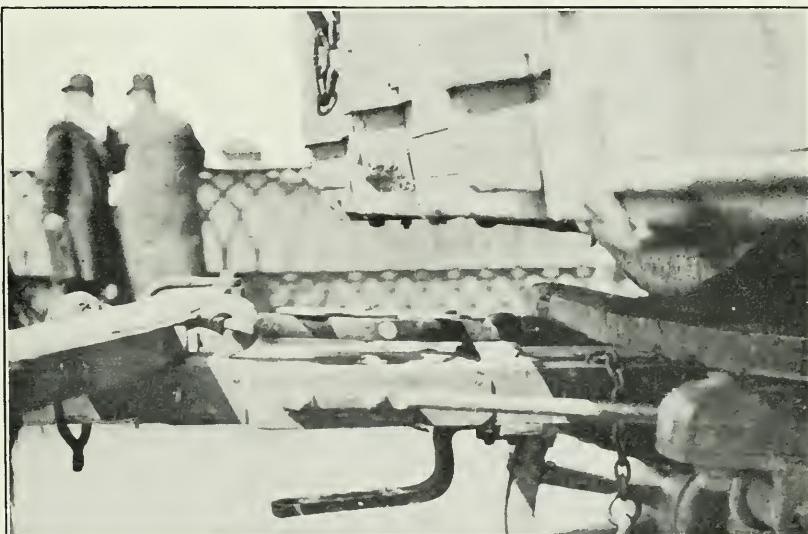
This class of pavement is still under the control of the Warren Bituminous Paving Company, who claim that this pavement is patented, and while I understand their patents have been upheld in the United States, their claims have not yet been tested in Canada, and I would recommend that this matter be referred to the Legal Department for a report as to the validity of such claims.

Under instructions from the Committee on Works, this pavement is recommended when a sufficiently signed petition is received, and the work is advertised in the usual manner, and while the Department, as is the usual practice, puts in a tender for this class of pavement, unfortunately the prices are based on the Warren Company's figures, with the result that there is no competition. In a few instances the Department has been the lowest tenderer by small amounts, but the Warren Company have always carried out the work at the Department's price.

The Constructing & Paving Company were awarded the contract for a bitulithic pavement on Binsearth Road, and had laid the foundation and then applied to the Department for permission to use a mixture of asphalt instead of using the Warren Company's patented material, but permission was refused on the ground that this was not according to the specifications. The Company then stated they would be prepared to give a bond indemnifying the City and the property owners from any loss, but this was not accepted and the surface was subsequently laid by the Warren Company. Under such circumstances as these this class of pavement becomes somewhat of a monopoly.



TOP VIEW OF APPARATUS

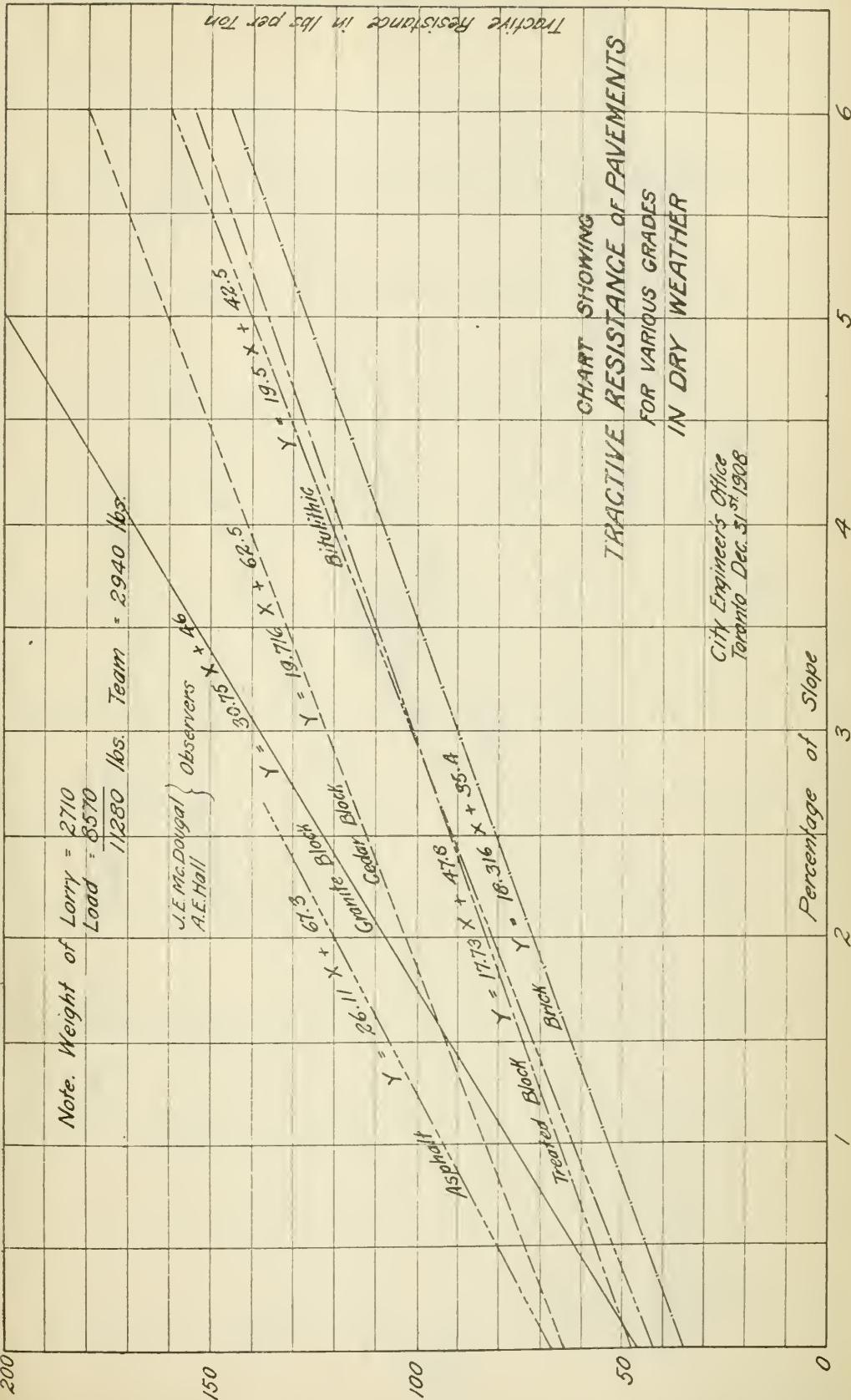


SIDE VIEW OF APPARATUS



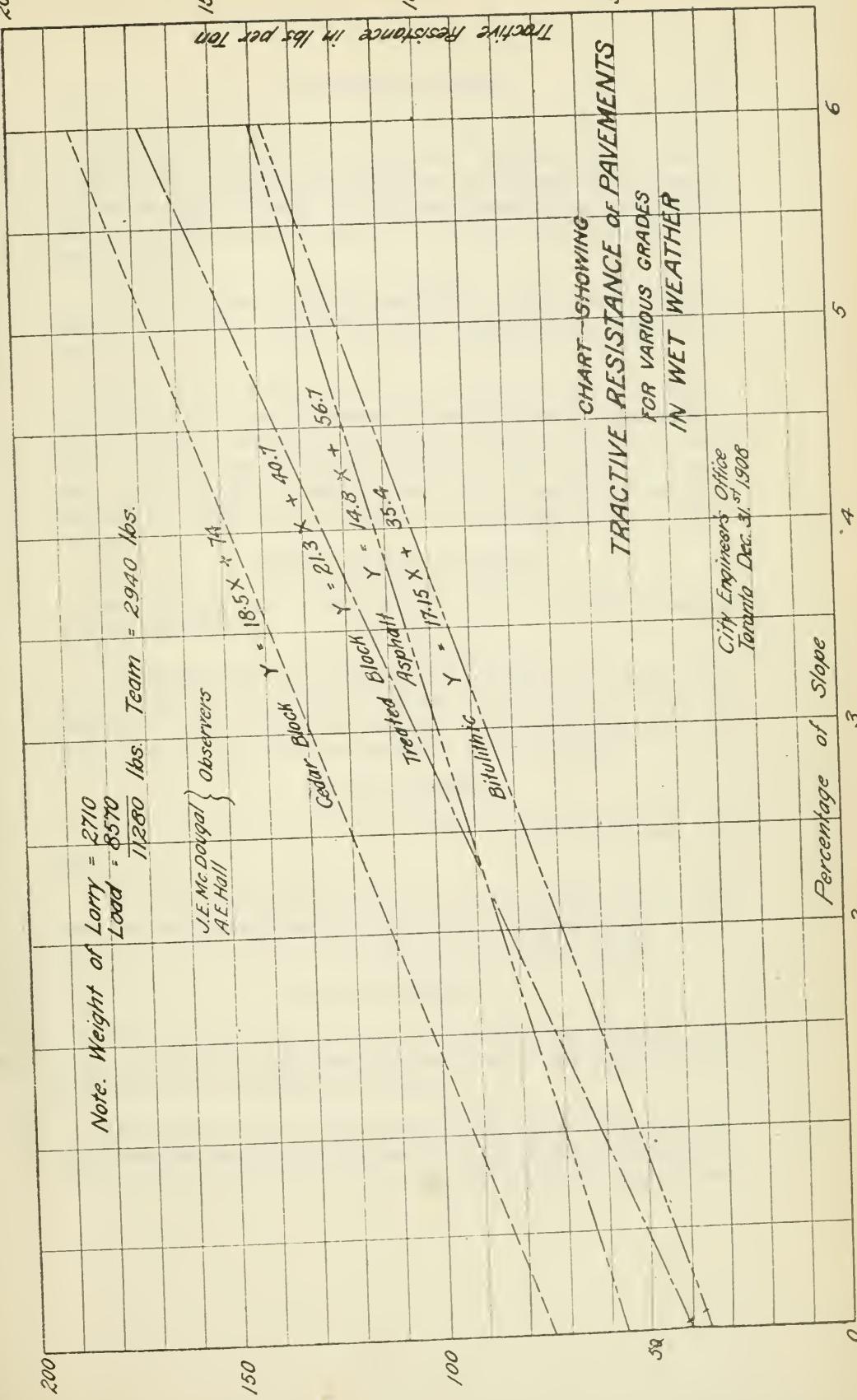
GENERAL VIEW—TRACTION EXPERIMENTS





CITY Engineers Office  
Toronto Dec. 31, 1908







As already explained, when petitions, sufficiently signed, are received asking for this class of pavement, the Department, according to instructions from the Committee on Works, recommends the pavement, and the asphalt and other contractors claim that they should have the same privilege.

During the year there was constructed a total mileage of 5.326 miles of this pavement laid. The total yardage laid was 80,539 square yards.

The agents for the various paving companies are a source of great annoyance to the citizens, by whom they are importuned to sign petitions for the particular pavement they represent, and in a great many cases the same parties sign petitions for two or three different kinds of roadway. I would suggest that no petitions should be sent out of the office, but that the Engineer should make what recommendations he thinks advisable.

#### ASPHALT BLOCK PAVEMENT.

During the past year 0.546 miles were laid, representing a yardage of 9,469 square yards.

The majority of the blocks used were three-inch. I do not think, however, that any less than four-inch blocks should be used on heavily travelled streets. More of this material would probably be used if it were not for the fact that sheet asphalt is so much cheaper.

#### BRICK PAVEMENT.

During the year about 30,748 square yards of this material was used.

Brick makes a very durable pavement, and I regret that it is not more extensively used, but there is so much opposition to this class of pavement owing to the alleged noise created by wheeled traffic.

#### MACADAM ROADWAYS.

Only about 12,000 square yards of this material were used, and some of our old macadam pavements have been torn up and replaced with a material of a more permanent character.

At the latter end of the season Queen Street Avenue was re-surfaced with macadam, and Tarvia was used on the surface. The amount of Tarvia used per square yard was three-quarters to one and a quarter gal-

lons, and the cost of same was six cents per gallon. If this turns out to be satisfactory, I would recommend that all the macadam streets be treated by this or some similar method.

#### CONCRETE PAVEMENTS.

During the year eight concrete pavements were constructed and in all but one instance this pavement was used in lanes. This class of pavement has given excellent satisfaction, but has not as yet been used on streets with very heavy traffic. The first cost is also considerably less than that of any other permanent pavement, with the possible exception of asphalt.

#### TRACK ALLOWANCE CONSTRUCTION AND RECONSTRUCTION.

There were completed during the year 0.204 miles of new granite block track allowance, and 8.280 miles of track allowance reconstructed. This reconstruction, however, is largely of a temporary nature, but it is a vast improvement on the previous condition of the tracks.

Since 1906, when the renewal of worn out track allowances was commenced on a permanent basis, 20.769 miles of work has been completed, and it is the intention during the coming season to carry out a thorough repair of such pavements as are in a bad condition. In the case of new track work it is the intention to change the cross section of the foundation by making it a uniform depth of 12 inches.

During the past year the sum of \$167,086.87 was spent in repairing the pavement between the tracks of The Toronto Railway Company, and there is still a great deal of this work to be carried out. With the approval of the Board of Control, where any new tracks have been laid, the City have put down a concrete foundation under the whole track allowance, with the result that the pavements constructed in this manner are standing very well under the traffic. It is to be regretted that this method was not adopted when the franchise was granted to the Company in 1892, as considerable saving would have been effected.

#### CONCRETE SIDEWALKS.

The total mileage of concrete sidewalks laid during the year was 55.101.

The guarantee period was reduced from five years to eighteen months. The result of this change is that more contractors tendered on sidewalks this year than formerly, and the prices, owing to this reduc-

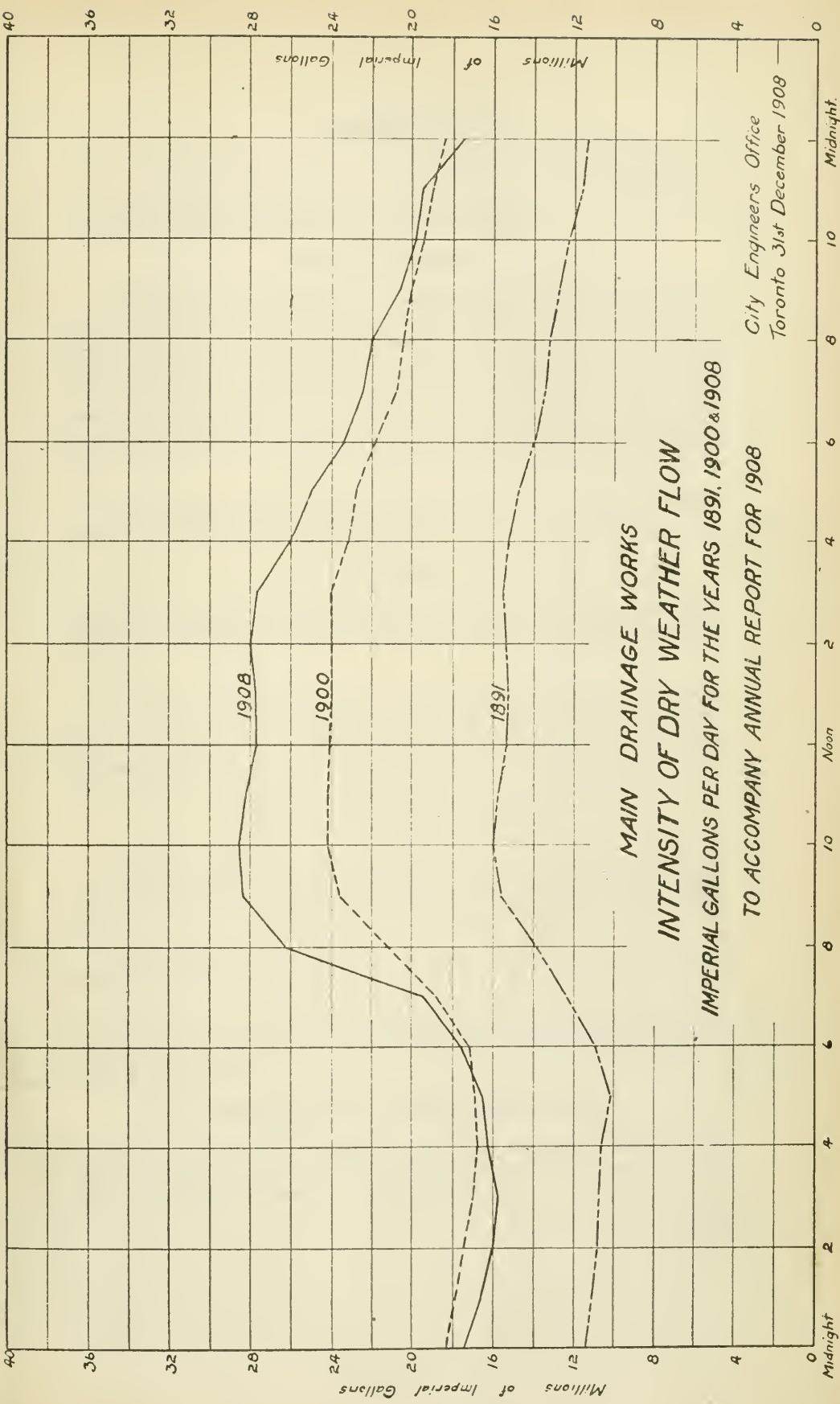


WEIR GAUGING, ROSEDALE CREEK SEWER



**MAIN DRAINAGE WORKS**  
**INTENSITY OF DRY WEATHER FLOW**  
**IMPERIAL GALLONS PER DAY FOR THE YEARS 1891, 1900 & 1908**  
**TO ACCOMPANY ANNUAL REPORT FOR 1908**

City Engineers Office  
 Toronto 31st December 1908





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tion of the guaranteed period, were considerably less. The total length of concrete walks in the City is now 340.919 miles.

#### SNOW CLEANING.

The practice of clearing snow from opposite vacant lots was carried out, and the cost of the work was \$9,494.32, most of which was assessed against properties abutting upon the walks cleaned, the rate being 4 4-10 mills per foot for each removal. This rate is higher by 1 4-10 mills than the rate for the winter of 1906-7, which was caused largely by the class of men employed in this work, a number of them being new, arrived immigrants who were not able to do as much work as our regular men.

For further information, I refer you to the report of the Assistant Engineer in charge of the Roadway Department.

#### SEWERS.

During the year a total of 9.19 miles of sewers of various descriptions were constructed. This makes a total mileage of sewers in the City of 275.01.

During the summer of 1907 the York County Loan Company applied for a system of sewerage for the large stretch of residential property controlled by them lying west of Roncesvalles Avenue. Upon the recommendation of this department the work was carried out by day labor and the work was done very much below the estimated cost.

#### WOODBINE SEWERAGE SYSTEM.

During the year it was found advisable to construct two sedimentation basins in this district for the purpose of intercepting the sand, which was not only injuring the pumps, but filling up the septic tanks.

These basins are answering the purpose for which they were constructed, in a satisfactory manner.

For further information in connection with this branch of the department, I would refer you to the report of the Assistant Engineer in charge of the work.

#### MAIN DRAINAGE AND OTHER SPECIAL WORKS.

This department had charge of the Main Drainage Works, plans and estimates in connection with the Track Elevation and the Sea Wall along the Lake Shore, west of the Old Fort.

The Main Drainage branch of the department was instituted as soon as possible after the By-law for the sum of \$2,400,000 was approved of by the ratepayers in July, and a general consideration of the whole scheme has been carefully gone into.

The plans of the intercepting sewers follow closely the lines laid down by Messrs. Hering and Grey in 1889, and plans for that section of the high level interceptor sewer lying between Jarvis Street and the Don were prepared and tenders called for on December 15th. The section of the sewers for which tenders were called provided for mass concrete throughout, but at the request of the bricklayers and brick-makers, the tenders were changed so as to allow for alternative bids, and the work was postponed until the beginning of the new year.

Gaugings were made during the months of October, November and December of all the main sewers. Previous gaugings were made in 1891 and 1900. The dry weather flow in 1891 was about 75 gallons, in 1900, 109 gallons, and in 1908, 73 gallons per head per day. The higher results obtained in 1900 were no doubt owing to the time of the year in which the gaugings were made and the presence of a great deal of sub-soil water in the sewers. It was also noticed that the fluctuation between midnight and noon is much greater in 1908 than in other years, and a table is attached to the report of the Assistant Engineer in charge of this work, showing the result of the gaugings of the various sewers.

The Council, after a great deal of discussion, finally purchased fifty acres of land, lying south of Queen Street, between Morley Avenue and the Woodbine, for the erection of the necessary disposal works. This purchase has since been so strenuously opposed by the residents in the neighborhood and also by those living in the newly annexed territory of East Toronto, that I have recommended that the professional opinion of Mr. Rudolph Hering, of New York, and Mr. John D. Watson, of Birmingham, England, should be obtained before the construction is proceeded with. In the meantime the staff are proceeding with the preparation of the plans for the remaining sections, and I trust the work will be commenced early in the Spring of next year.

#### ELIMINATION OF GRADE CROSSINGS.

The question of eliminating grade crossings along the Esplanade has been prominently before the public for the past two or three years, and during 1907 and 1908 the matter was heard before the Board of Railway Commissioners for Canada upon an application from the City Mr. Isham Randolph, of Chicago, Mr. W. F. Tye, of Montreal, and Mr.



GENERAL VIEW LOOKING WEST



SEA WALL



F. L. Sommerville, of Toronto, were retained by the City as advisory engineers.

At the request of the Board of Railway Commissioners for Canada, plans were prepared in this office for the elevation of the tracks running along the Esplanade, between Logan Avenue, crossing the G. T. R. tracks, the Queen Street crossing of the C. P. R. and C. N. O. and Bathurst Street. The preparation of details, supplementary estimates, etc., required by the Board of Railway Commissioners, added considerably to the work of this department.

L. On the 31st of December a draft order was made by the Board of Railway Commissioners ordering the Railway Companies to elevate four tracks along the water front between York and Cherry Streets.

The abolition of the crossings west of Dufferin Street to the Humber has not yet been decided, but the Board of Railway Commissioners propose to deal with this matter early in the coming year.

The Railway Companies opposed the elevation of the tracks, and recommended the construction of bridges for the carrying of vehicular and pedestrian traffic over the railway tracks. These bridges were planned by the Railway Companies to commence at or near Front Street, and, after crossing the tracks, descending towards the Bay on obtainable grades. In view of the manifest injury to lake borne traffic, and to the objection of bridges, this department made a series of experiments to show the result of tractive effort to loads on various grades, and the results of the tests, which are well worthy of perusal, are fully given in the report of the Assistant Engineer. It was ascertained that the brick pavement gave the best results.

#### SEA WALL

The Sea Wall in front of the Exhibition Grounds is now completed. In the early part of the season the progress was slow, owing to the inclement weather and the exposed position, but during the summer the work progressed much more favorably. 163 cribs were placed, giving a total of 2,714 feet.

The filling behind the wall, which is now in progress, is composed of street cleanings and garbage, topped with earth, a great deal of which was hauled from the Lansdowne Avenue Subway, the contractors being paid for overhaul.

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**SEA WALL BETWEEN INDIAN ROAD AND THE HUMBER RIVER.**

This work was commenced on the 16th of September. The form of construction adopted by the Council was an alternative design submitted by the Park Commissioner, calling for stone-filled cribs resting on sand, gravel and boulders, and surmounted by a mass concrete wall.

Two lines of timber crib-work, at right angles to the shore, and three cribs of forty-two feet in length, were placed in position when the work was stopped for the season. The balance of the cribs are now completed at the contractor's yard, and will be ready to be placed in position as soon as the weather permits. Although no observations respecting the stability of the wall are yet possible, I do not think this type of wall should be used in future extensions.

**REPAIRS AND MAINTENANCE OF BRIDGES, WHARVES, ETC.**

The usual repairs to bridges and wharves have been undertaken. During the past year a new steel foot bridge was erected to take the place of the old wooden bridge crossing the Don, north of Gerrard Street. This bridge was constructed by the Dickson Bros., of Campbellford, Ont., the contract price being \$3,421.

A small concrete culvert was constructed on Poplar Plains Road at the creek crossing just north of the C. P. R. tracks.

Winchester Street Bridge.—This bridge is in a very dangerous condition and will have to be replaced either by a new steel bridge or a new superstructure constructed.

**LANSDOWNE AVENUE SUBWAY.**

The most important work carried out by this branch of the department during the year was the Lansdowne Avenue Subway. The contract for the substructure was awarded to the Godson Contracting Company, of this City, which company completed the concrete work, and also did a great deal of excavating. The contractors for the superstructure were the Cleveland Bridge & Engineering Company, of Darlington, England, the contract price being \$53,443.38. This work should be completed early in the coming year, and will afford a much needed thoroughfare in the north-west part of the City.

**PUBLIC CONVENIENCES.**

The lavatory at the intersection of Toronto and Adelaide Streets was practically rebuilt, and a woman's lavatory constructed adjoining the men's lavatory on Cottingham Street, the cost of which was \$5,243.

The number of persons using these conveniences during the year is as follows:—

Yonge and Cottingham Streets .....	97,973
Queen Street and Spadina Avenue .....	579,085
Toronto and Adelaide Streets .....	203,965
Women's lavatory, Cottingham Street .....	2,511

For further information I refer you to the report of the Assistant Engineer in charge of this branch of the department.

STAFF.

I beg to call the attention of your Council to the absolute necessity of more office and vault accommodation. The work has increased so rapidly that it has been necessary to add to the staff, and consequently the present office space is quite inadequate for the proper and economical carrying out of the work, and as a result members of this department have rooms in different parts of the City Hall.

I understand the School Board have been considering the advisability of vacating their present quarters. The rooms now occupied by that Board would be admirably adapted for the use of this department.

The members of the staff have, during the year, performed their duties in a most satisfactory manner, and I trust your Council will take into consideration the granting of substantial increases to some of the assistants, who are very inadequately paid. The saving during the past two or three years by this office in works carried out by day labor equals the total salaries paid, and I consider that the officials who have so efficiently carried out these works, deserve some consideration.

Respectfully submitted,

C. H. RUST,  
*City Engineer, and Chief Engineer  
and Manager of the Water-Works.*

# Report of Deputy City Engineer and Assistant Engineer in Charge of Water Works

CITY ENGINEER'S DEPARTMENT,  
Toronto, December 31st, 1908.

MR. C. H. RUST,  
*City Engineer.*

DEAR SIR.—I herewith submit the Annual Report of this Department for the year ending December 31st, 1908.

## DISTRIBUTION.

97,289 feet of mains have been laid during the year, consisting of

23,972 feet of 20-inch Cast Iron Main.

5,158 $\frac{3}{4}$	"	16	"	"
10,737 $\frac{1}{2}$	"	12	"	"
1,069	"	8	"	"
53,492 $\frac{3}{4}$	"	6	"	"
2,859	"	4	"	"

97,289 feet.

At the end of the year the total length of mains in use was 323.743 miles.

## STOP VALVES.

The number of stop valves placed in position is as follows:—

1	—	24-inch stop valve.	.
30	—	20 "	"
9	—	16 "	"
37	—	12 "	"
4	—	8 "	"
179	—	6 "	"
9	—	4 "	"

There were taken out during the year one 12-inch and one 9 inch stop valves, making a total of 3,091 stop valves.

There are 73 check valves in position.

## HYDRANTS.

Fire hydrants to the number of one hundred and eighty-two have been placed on the streets during the year, consisting of one hundred and twenty 3-way and sixty-two 2-way hydrants.

In addition forty-one 2-way hydrants have been replaced by 3-way hydrants.

Six 4-way hydrants were placed at the Dominion Radiator Company's works, one 2-way hydrant at the Asphalt Plant, Princess Street Yard, and two 3-way at the Sunnyside Orphanage.

Ten 2-way hydrants were removed from off the streets, leaving a total of 3,725 hydrants in use.

## HOUSE SERVICES.

The total number of services laid this year was 3,641.

## LEAKS ON MAINS.

12	on	36-inch	mains.
3	"	30	"
8	"	24	"
—	"	20	"
—	"	16	"
74	"	12	"
2	"	10	"
4	"	8	"
104	"	6	"
9	"	4	"
1	"	3	"

217 of all sizes.

The cost of repairing, exclusive of repairs to asphalt pavement, was \$2,267.42, including material used, or an average cost of \$10.44 per leak.

The average number of leaks per mile of distribution is 0.669, and the average cost per mile \$6.99.

## STORE HOUSE.

The stock on hand has been kept up, and that on hand at the end of the year checked and found correct.

## STABLES.

The cost of this branch for the year, including feed, veterinary surgeon, repairs to wagons, harness, sleighs, etc., was \$8,110.48.

## METER AND MACHINE SHOP.

General repairs have been made for the following Departments:—  
 City Treasurer's, Engineer's, City Hall Boiler Room, Conduit, Public  
 Conveniences, Park Commissioner, Fountains, House Services, High  
 Pressure System, St. Lawrence Market, Island Fire Protection, Island  
 Water Works, Weed Cutter, Main Pumping Station, Island Pumping  
 Station, High Level Pumping Station, Sand Pumps Nos. 1, 2 and 3,  
 Reservoir Grounds, Roadway Department, Sewer Department, Special  
 Surveys, Tug "National" and New Tunnel.

The total number of meters in use .....	2,768
Number of meters rebuilt in shop .....	334
Number of meters inspected and repaired without removal .....	1,528
Number of meters taken off for repairs and replaced .....	368
New meter takers .....	259
Meters ordered off .....	78
Total value of meters in service .....	\$144,969.25
Valves placed on Island in spring and removed in fall.....	51
Number of drinking taps placed on Island .....	21
Number of drinking fountains in use .....	66
Combination fountains in use .....	15

## HYDRANT AND VALVE DEPARTMENT.

Hydrants inspected .....	25,871
Pumped, packed and oiled .....	1,572
Fired, thawed or fired, blown out, pumped, packed and oiled .....	956
Repaired on street .....	181
Painted on street .....	880
Fountains painted on street .....	42
High pressure hydrants repaired on street .....	4
High pressure hydrants examined on street .....	303
High pressure hydrants painted on street .....	75
Tightened with bar and chain .....	19
Set in line .....	37
Jackets cut .....	9
Crowns chipped .....	8
Dies run on nozzles .....	2
Caps loosened and oiled .....	272
Mains blown out .....	146
High pressure mains blown out .....	12

## MATERIAL USED.

New joint rings .....	103
" chain rings .....	310
" valves .....	116
" wedges .....	1
" screws .....	7
" nozzles .....	7
" cap leather .....	653
Nozzles caulked .....	1,317
Chain rings closed .....	349
New caps .....	21
Repaired caps .....	25
New grummets .....	1
" valve washers .....	3
Leather valves built in shop .....	169
New packing rings .....	61
" brass shackles .....	2
" 4-way spindles (small) .....	?
" 4-way spindles (main) .....	2

## VALVES TESTED IN SHOP.

20-in.	12-in.	8-in.	6-in.	4-in.	3-in.	Total
14	58	11	198	1	31	
2-in.	1½-in.	1¼-in.	1-in.	¾-in.	½-in.	
112	6	6	47	14	86	584

## HYDRANTS REPLACED ON STREET.

2-ways with 2-ways.	3-ways with 2-ways.	3-ways with 3-ways.
64	39	8
2-ways with 3-ways.	.....	Total 114
3		

## NEW HYDRANTS PLACED.

2-ways.	3-ways.	4-ways.
6	121	5

## HYDRANTS REMOVED ON STREET AND PLUGGED.

2-ways.
1.

## HYDRANTS TESTED IN SHOP.

2-ways.	3-ways.	4-ways.
141	184	5

## HYDRANTS REBUILT IN SHOP.

2-ways.	3-ways.
76	47

## MAINS CHARGED.

All new 16" and 20" mains and extensions were charged by this Department.

Fence, e.s. Yonge, Severn to Roxboro', painted.

" and rail at Reservoir Grounds painted.

Hydrants rebuilt in shop .....	123
--------------------------------	-----

## MATERIAL USED.

Packing rings .....	61
Tee valves .....	82
Sludge valves .....	67
New screws .....	10
" nozzles .....	138
" brass shackles .....	2
Extension pieces .....	39
Packing, nuts .....	25
½ pr. I. washers .....	48
Valves inspected on street .....	867
Packed and oiled .....	14
Repaired on street .....	36
New valve screws .....	26
" iron tops .....	15
" gland bolts .....	30
" valve seats .....	1
" packing rings .....	6
" rubber joints .....	7
" tops .....	11
" set screws .....	17
" domes .....	1
" spindles .....	1
" bolts .....	9
" small relief valves .....	3
" large valves .....	4
Centre valve chamber tops .....	2
Elbows tested in shop .....	21
Brasswork tested in shop, pes.	8,876
5/8 x 1/2 x 1/2 D. cocks .....	779
5/8 x 3/4 " " .....	207
5/8 couplings .....	286
3/8 S. cocks .....	346

$\frac{1}{2}$ S. cocks .....	1,199
$\frac{1}{2}$ S. nipples .....	754
$\frac{3}{4}$ S. cocks .....	73
$\frac{1}{2}$ couplings .....	2,276
$\frac{5}{8}$ S. cocks .....	540
$\frac{5}{8}$ D. nipples .....	1,221
$\frac{5}{8}$ S. " .....	534
$\frac{3}{4}$ S. " .....	60
$\frac{3}{4}$ couplings .....	219
$\frac{1}{2}$ S. nipples .....	3
$\frac{3}{4}$ S. " .....	379

## SMITH SHOP.

New drills .....	33
" caulking tools .....	29
" Pike pole hooks .....	13
" wedges .....	6
" tan pins .....	16
" cap rings .....	25
" hooks .....	109
" pr. hinges .....	4
" I. handles .....	20
" chain rings .....	200
" straps .....	15
" box wrenches .....	3
" spindles .....	2
" hangers .....	8
" chain .....	1
" picket shoes .....	6
" chisels .....	97
" forgings .....	18
" yarn irons .....	6
" eye bolts .....	36
" pr. tongs .....	1
" stop cock keys .....	17
" valve keys .....	24
" prong keys .....	1
" bolts .....	177
" crowbars .....	33
" rakes .....	2
" iron ladders .....	3
" spikes .....	363
" clamps .....	41
" steel keys .....	7
" spanners .....	14
" boiler tools .....	31

New bursting wedges .....	8
" tube cleaners .....	1
" steel plates .....	5
" nuts .....	5
" iron frames .....	2
" brackets .....	23
" steel screw-drivers .....	16
" iron rings .....	35
" pipe flanges .....	18
" catches and keys .....	24
Boiler tools repaired .....	355
Mudhole bolts repaired .....	56
Picks sharpened .....	559
" laid and steel .....	71
Chisels sharpened .....	486
Reamers forged .....	13
Tunneling bars repaired .....	322
Drills sharpened .....	80
Prs. lathes repaired .....	4
Valve keys repaired .....	6
Coal cart repaired .....	2
½ rods (service) .....	205
Rods (service) .....	4,156

## RESERVOIR.

The average depth of water in the Reservoir for the year was 16 ft. 7 in., equal to an elevation of 212 ft. 7 in. above zero level of Lake Ontario, and containing 24,470,821 gallons.

The lowest elevation of water was 203 feet 7 in. above zero on 12th of September; the highest 216 ft. 10 in. on 2nd and 10th of November.

The Reservoir could not be spared for cleaning again this year owing to the difficulty of keeping up the supply of water and pressure in the mains.

## TEMPERATURE OF WATER.

The average temperature for the year taken at the City Hall tap was 44.58 degrees Fahrenheit.

The highest temperature, 64 degrees Fahrenheit, on the 21st of September, and the lowest, 35 degrees Fahrenheit, on the 21st of March.

## HIGH LEVEL PUMPING STATION.

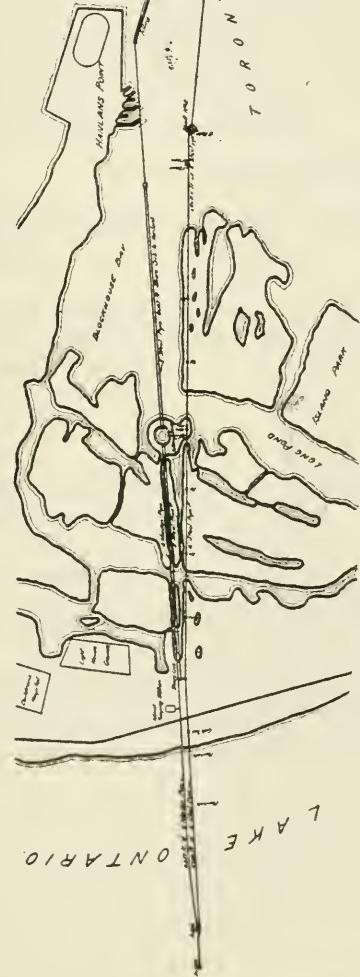
1,864,775,994 gallons of water were repumped during the year, the daily average being 5,108,975 gallons. The cost of running the station, including repairs, etc., was \$17,311.75.

T. W. W.

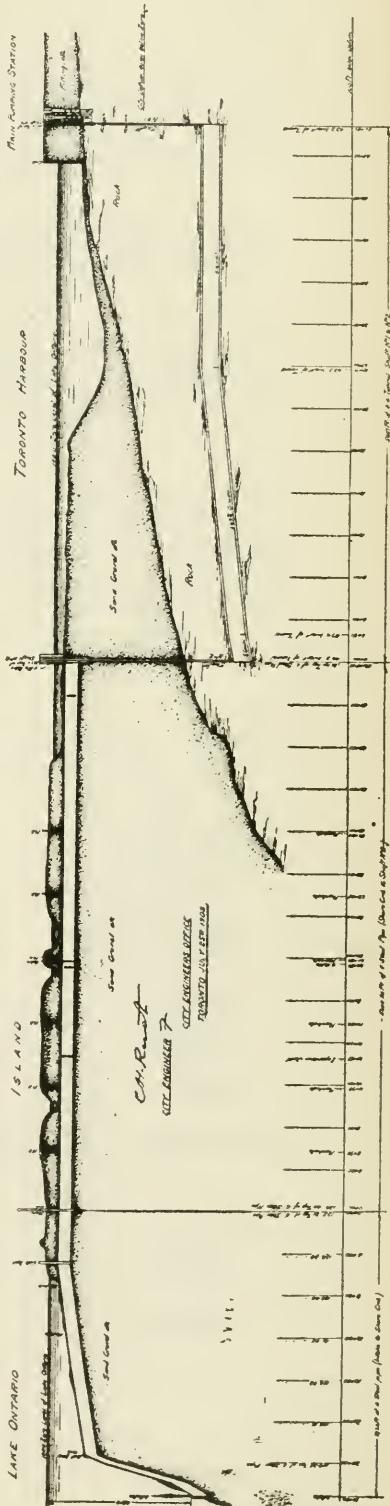
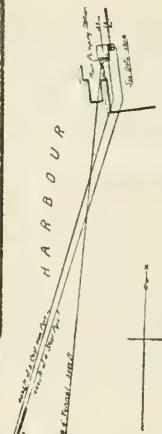
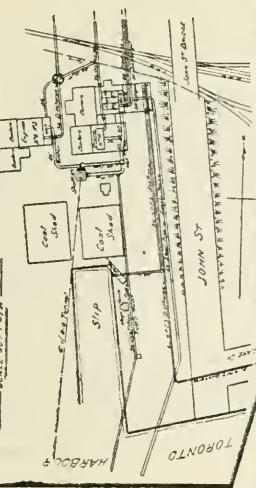
PLAN SHOWING  
CONDUITS FROM INTAKE TO MAIN PUMPING STATION

PROFILE ON LINE OF CAST-STEEL CONDUIT & TUNNEL

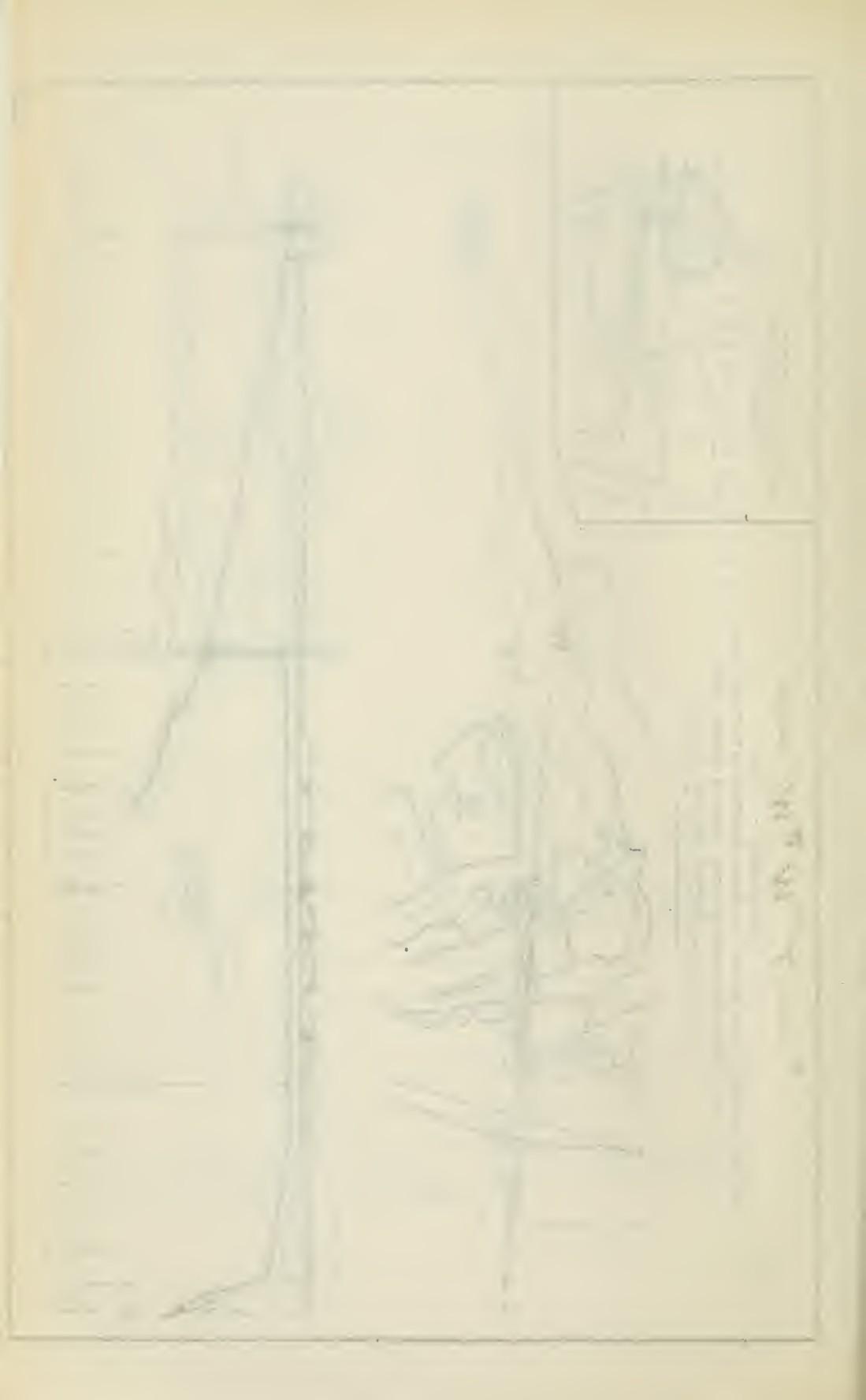
SCALES (HORIZONTAL 400 FT./IN. VERTICAL 80 FT./IN.)



MAIN PUMPING STATION TORONTO  
SECTIONAL



2. 10. 14.



The contractor for Engine No. 3, the new six million gallon, has completed the construction and erection of same. The contract for this engine was signed on May 30th, 1905, and the time allowed for its construction, including extensions, eighteen months.

The engine has not, as yet, been taken over by the City, although it has been in service since the 1st of December, 1908, the contractor not being ready for the official test.

A contract has also been made this year with the John Inglis Company, of this City, for the construction and erection of a duplicate six-million triple expansion pumping engine. Progress on this engine has been satisfactory.

The completion of the first six-million gallon engine has enabled the Department to overhaul one of the smaller engines, of which there are two of 3,000,000 capacity each. These engines were erected in 1890, since when practically no opportunity has occurred to permit of their being thoroughly overhauled, all minor repairs being made at night whilst the engines were shut down.

#### MAIN PUMPING STATION.

10,620,424,930 gallons of water were pumped during the year; of this quantity

	Gallons.
Nos. 1 and 2 engines pumped .....	327,493,447
Nos. 4 and 5 engines pumped .....	5,388,321,032
No. 6 engine pumped .....	4,904,610,451
	<hr/>
	10,620,424,930
	<hr/>
This year's daily pumpage .....	29,097,054
Last year's daily pumpage .....	28,374,101
	<hr/>
Increase .....	722,953

The coal consumed during the year amounted to 15,785,575 tons.

The cost of running the station was:

For coal and cartage of ashes .....	\$49,226.46
For wages, oil, waste, repairs .....	56,094.39
	<hr/>
	\$105,320.85

## ISLAND PUMPING STATION.

Pumping at this station began on the 27th day of April and lasted till the 1st of November.

The installation of the million-gallon pump has been of great assistance in keeping up the supply and pressure. Last year it was found impossible to do either with only the half million-gallon pump running.

## TUNNEL.

The construction of the tunnel across the bay, a distance of 5,087 ft., marks the completion of the improvement proposed by Mr. E. H. Keating, City Engineer in 1895, and endorsed by Mr. Mansergh, of London, England, who was called in to advise the City as to what source should be adopted for increasing the water supply, the choice lying between a gravity supply from Lake Simcoe, 40 miles distant, or a supply pumped from Lake Ontario. From borings taken across the bay it was found that shale rock existed under the bay at a depth of 15 feet below zero at the Main Pumping Station grounds, and dipping to the south, on a grade of about 1 ft. in 100, reaching a depth of 64½ ft. below zero at the South Tunnel Shaft.

The reasons that led to the adoption of the tunnel were: the difficulty and cost of laying 6-ft. pipe or larger across the bay at a depth that would not obstruct future deep water navigation, the expense of anchoring same so as to permit of its being safely emptied and examined for leaks, as well as the impossibility of keeping sewage out of it (the bottom of the bay being covered with from three to four feet of sewage) while laying, and the impossibility of thoroughly cleaning it if it could not be emptied. Estimates were made for both cast iron and steel pipe from the lake intake to the pumping station well, and also for a tunnel under the bay and a steel pipe from tunnel to lake intake as follows:—

Tunnel and steel pipe across Island to lake intake .....	\$525,000
6-ft. cast iron pipe from well to lake intake .....	560,000
6 -ft. steel pipe from well to intake .....	518,000

Between 1896 and 1898, 2,357 ft. of steel pipe was laid from Shore Crib to the intake. Nothing further was done till 1904, when a contract was let for 85 lengths of 6-ft. steel pipe and the laying of same, this completing the tunnel scheme from the intake to the south shaft of the proposed tunnel.



MEETING OF THE TWO HEADINGS



SHEWING TIMBERING TUNNEL





BRICK ARCH



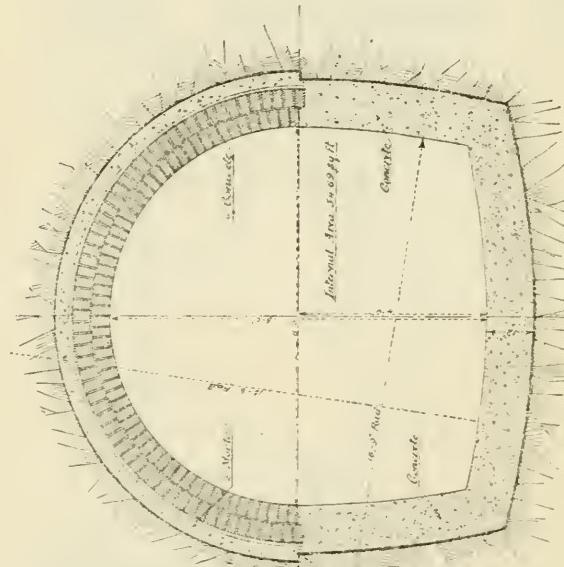
BLASTING GANG—TUNNEL



TORONTO WATER WORKS.

TUNNEL  
FROM ISLAND TO MAIN PUMPING STATION

SCALE 1 INCH = 1 FOOT.



CROSS SECTION.

No 3.

2nd Plan.

City Engineer.

City Engineers Office.

Toronto Water Works.



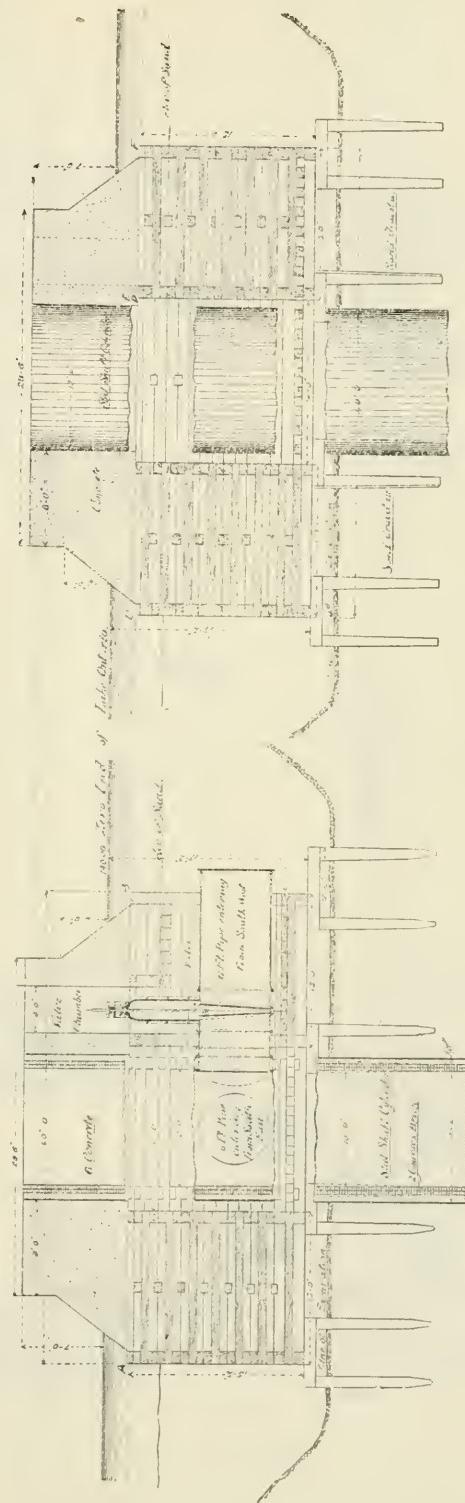
**TORONTO WATER WORKS.**

**TUNNEL**

**FROM ISLAND TO MAIN PUMPING STATION**

**DETAIL OF CRIB, SOUTH OR NO<sup>2</sup> SHAFT.**

**SCALE 1/INCH = 1 FOOT.**



**SECTION AB**

**SECTION CDEF**

**No 5.**

*Cost Part*

*- City Engineer's Office*

*- Toronto Water Works*

*1/2 INCH = 1 FT.*



## TORONTO WATER WORKS.

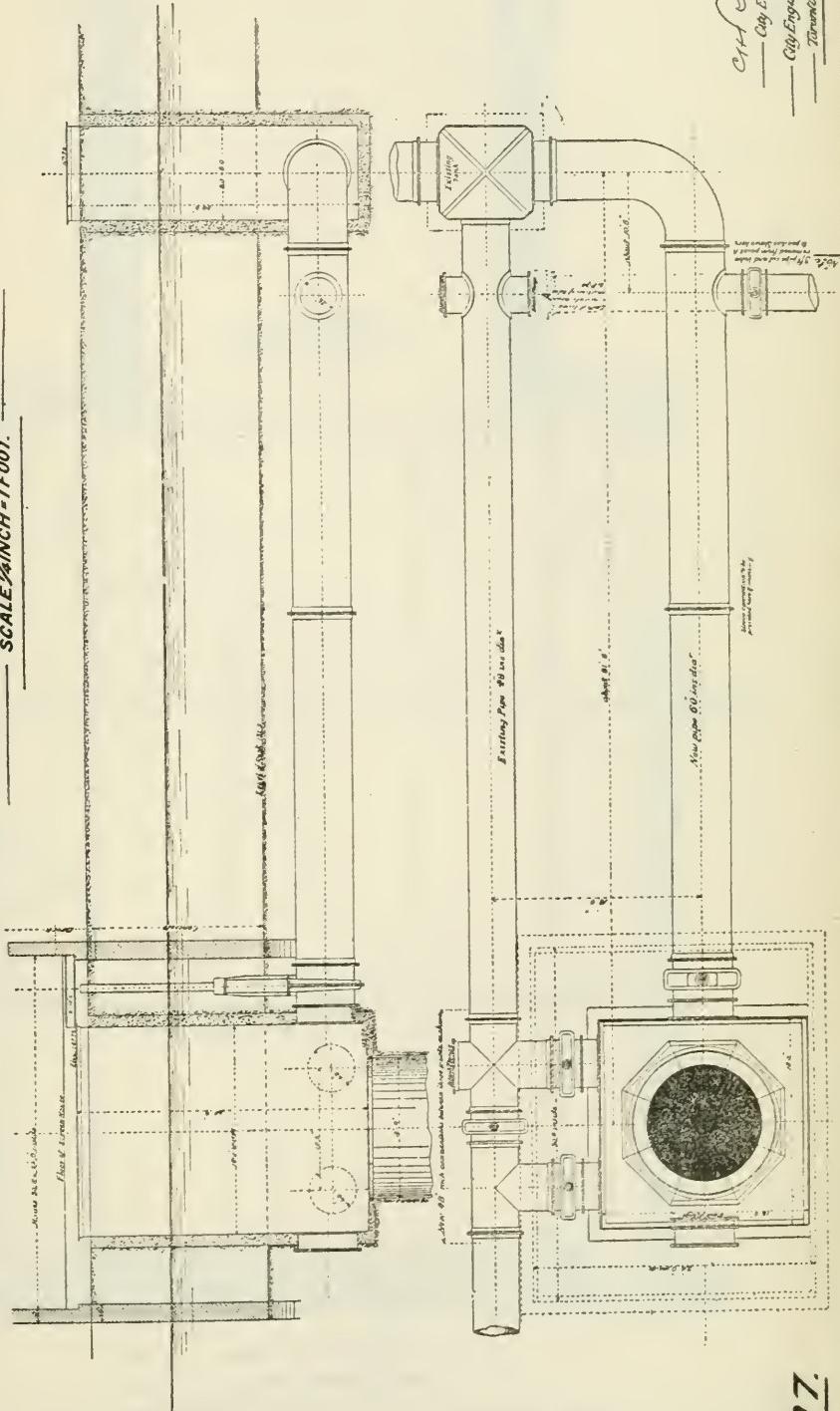
TUNNEL

## FROM ISLAND TO MAIN PUMPING STATION

SERIALS SHEET OF PAGES AND TANKS

PLAN DE LA MUSIQUE

SCALE 1/4 INCH = 100 FT.



N. 97.

THE HISTORY OF  
SOCIETY

SOCIALIST

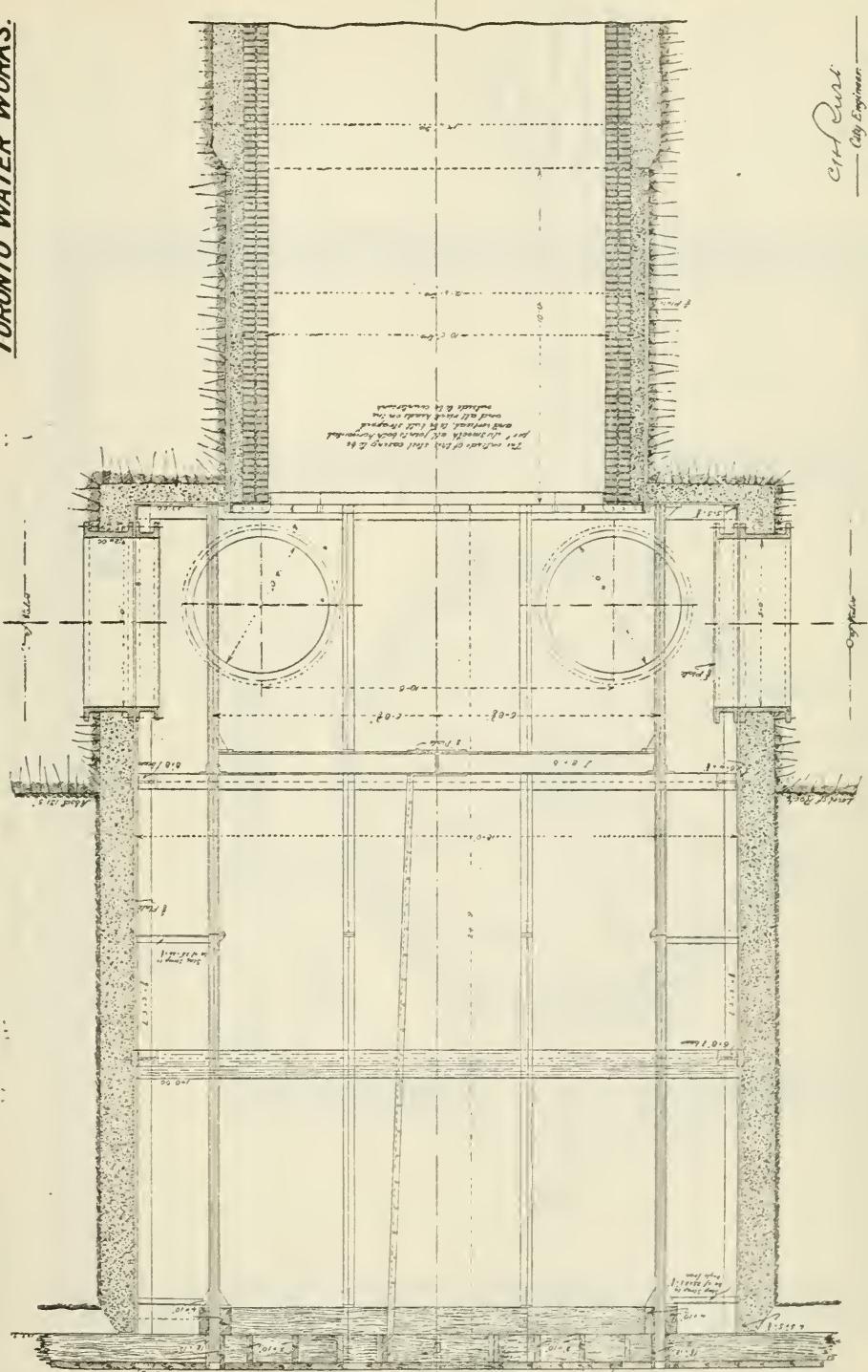
THE HISTORY OF  
SOCIALISM IN  
AMERICA

BY

CHARLES

WILLIAMS

TORONTO WATER WORKS.



SCALE 1/INCH = 1FOOT.

SHAF.

NORTH.

ELEVATION OF SCREEN CHAMBER

FROM ISLAND TO MAIN PUMPING STATION

TUNNEL

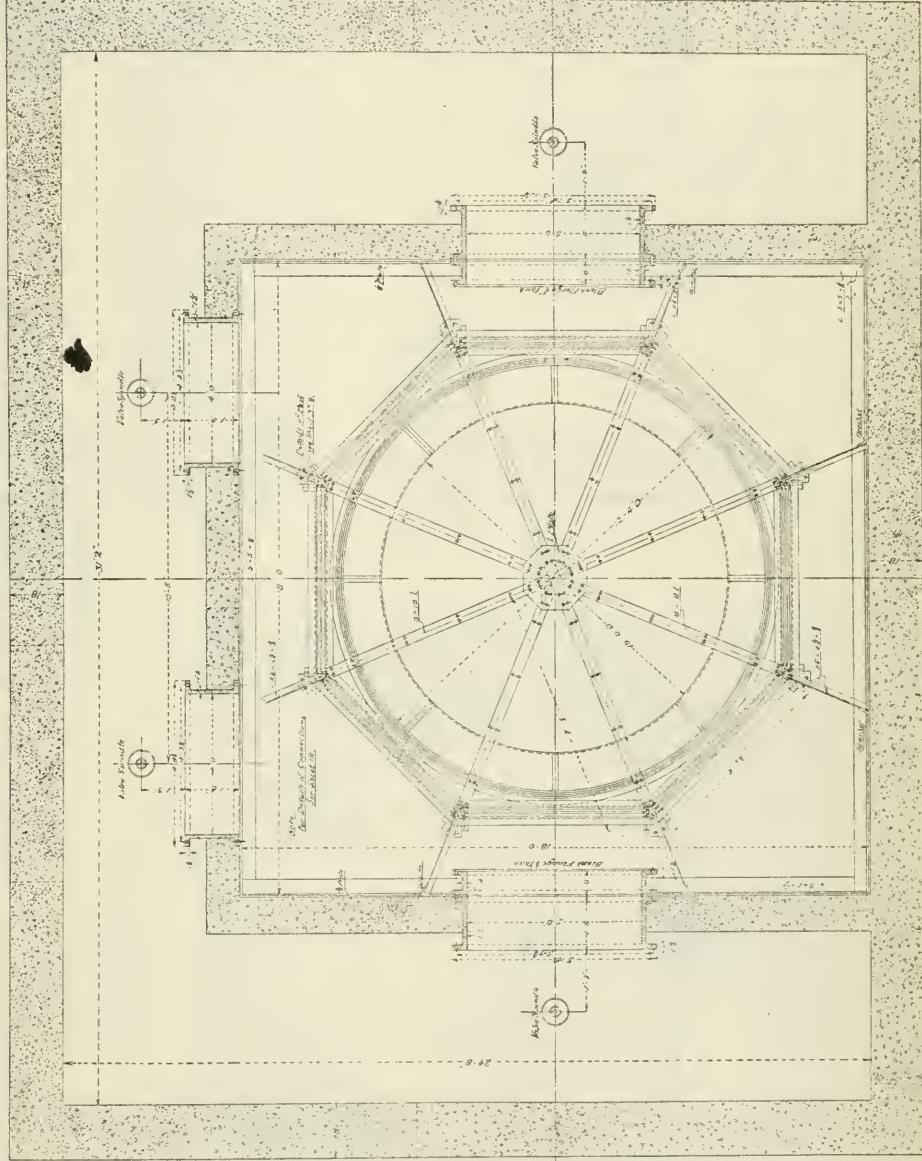
No. 8.

1900



TORONTO WATER WORKS.

TUNNEL  
— FROM ISLAND TO MAIN PUMPING STATION —



ASZC  
The 60' Connection has got 1 Bulb  
sewers on the several sides  
the 9' G. Connection has 30' J. Both  
sewers straddle the vertical centre

— PLAN —  
— OF —  
— SCREEN CHAMBER —  
— NORTH OR N°1 SHAFT —  
— SCALE 1/INCH = 100 FT —

C. F. Purcell  
City Engineer  
City Engineers Office  
Toronto No. 2005.

No. 9.

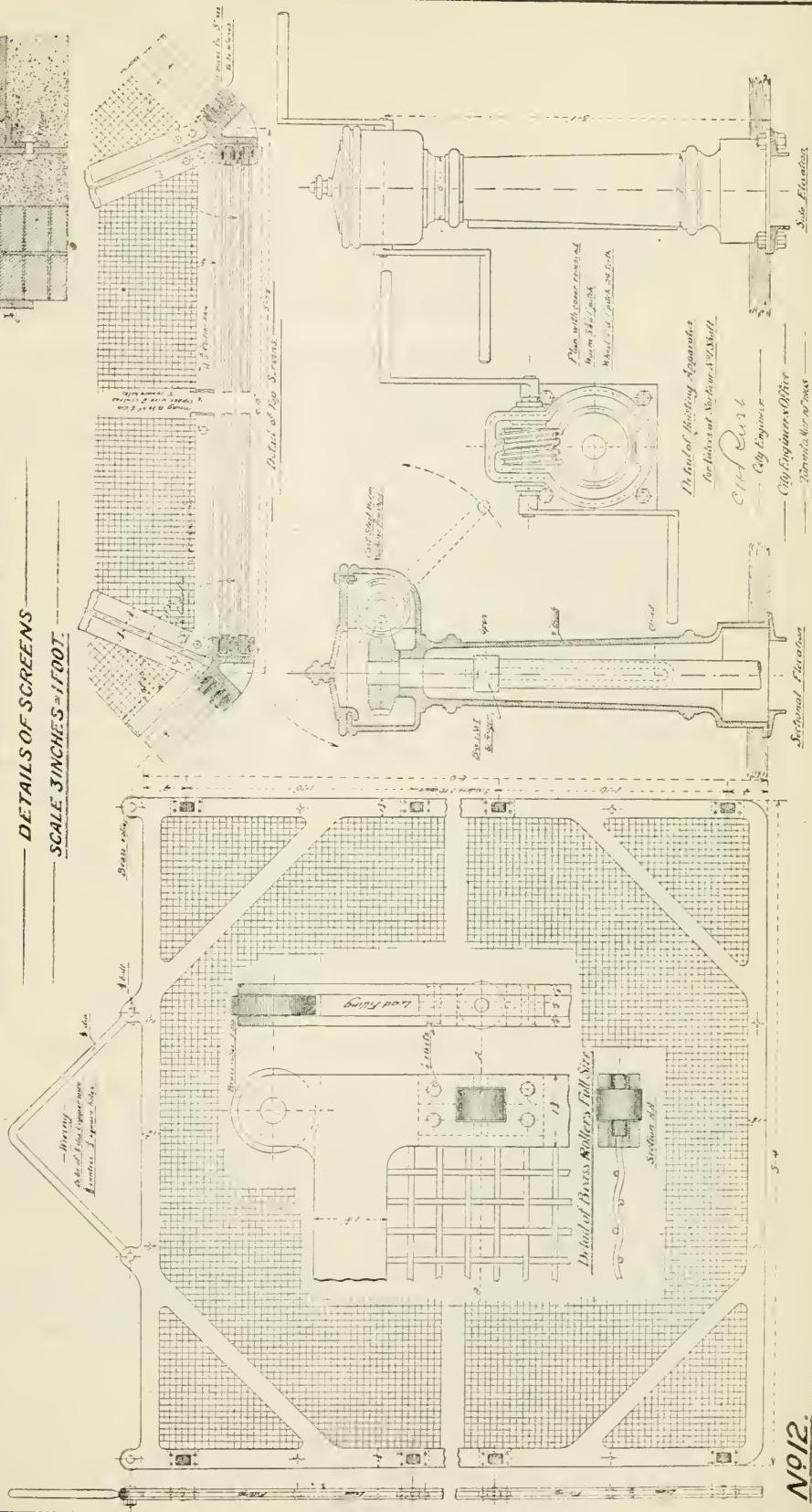


*TORONTO WATER WORKS.*

## TUNNEL

*— DETAILS OF SCREENS —  
SCALE 3 INCHES = 1 FOOT. —*

SCALE 3 INCHES = 1500 FT.



No 12



In 1905 a contract was entered into with Messrs. Haney & Miller for the construction of a tunnel and connections under Toronto Bay, the contract price being \$269,000. Work was begun in October at the Island end, consisting of a dam around the shaft site and the erection of the necessary platforms and buildings for supplies and plant.

Active operations did not begin till Spring of 1906, and after the 12-ft. 4-in. shaft cylinders had been received. These shells were of steel 12 ft. 4 in. in diameter,  $\frac{3}{4}$  in. thick and 10 ft. in length, bolted together through flanges on the inside of shell.

An attempt was made to sink them by means of water jets and weights, the material being clammed from the inside of the shell. On reaching a depth of 40 ft. the caisson stuck; the contractor then resorted to dynamite, with the result that the two bottom sections had to be removed owing to the damage caused by a too heavy charge of dynamite being used, and the whole work of sinking the caisson had to be done over again. The next attempt proved successful, the caisson being carried about 5 ft. into the rock and sealed. During these operations the contractors had a boring machine designed and built with which they expected to bore the tunnel, the section having been changed from a horseshoe shape to a cylindrical shape to permit of this being done.

Unfortunately, owing to electrical difficulties, it failed to work satisfactorily, and as the contractor was limited as to time, he decided to have recourse to the ordinary method of tunnelling, the section of same reverting to a horseshoe having three rings of brick for the arch, the side walls and invert being of 1:2:4 concrete; the overbreak over the arch was dry packed except the haunches, which were laid in mortar. All below the arch was concreted to the rock.

Operations were carried on simultaneously from both shafts.

Work on tunnel started October 1st, 1907, at Island end, and about one month later at Main Station end, the headings meeting July 14th, 1908. The best month's work for a single heading being 345 ft., and for both headings 660 ft. Boring, mucking, and concreting were carried on at the same time; the brick work, however, was done at night.

The total quantity of leakage dealt with was 550,000 gallons in 24 hours. It was piped through the walls, the green work being protected by canvas screens and tar felt till the mortar had set. This seepage was found to be quite salty and to contain only a few harmless

varieties of bacteria. The pressure behind the brick work with all weepers closed was shown by a gauge to be 15 to 17 lbs. per square inch. The head due to lake level is over 40 lbs. per square inch.

The attached tracings give a general idea of the plan of construction.

On the 30th December water was admitted to the tunnel, and on 1st January, 1909, at 5 o'clock, the pumps commenced taking their supply from same.

Provision has been made for two 6-ft. pipes connecting with the tunnel at south shaft when necessary, as the capacity of same is about 80 million gallons per day. The contractors deserve a great deal of praise for the manner in which they have pushed this work to completion.

#### WATER FILTRATION.

This year a By-law was passed by the ratepayers granting \$750,000 for the construction of slow sand filters on the Island. The designing of these filters has been placed in the hands of Mr. Allen Hazen, the well-known expert in such matters, and it is expected that early in the coming year the work will be under contract.

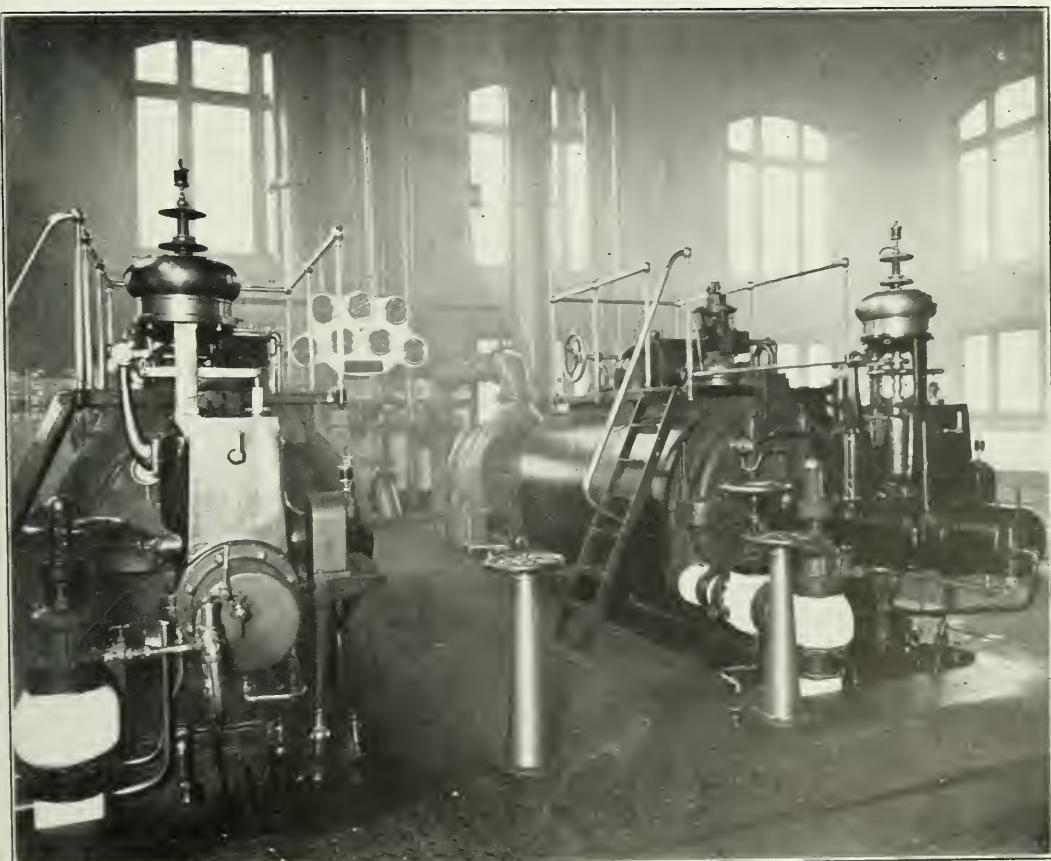
#### HIGH PRESSURE FIRE SYSTEM.

The area served by this system covers three hundred acres, extending from John Street easterly to Jarvis Street, and from the water front to Queen Street, with a line up Terauley to Albert, along Albert to James and up James Street two hundred feet. A line also extends up Victoria Street to Shuter Street, from Queen, and westerly on Shuter to Yonge, the length of mains laid amounting to 45,241 feet on which are located 146 hydrants.

As will be seen on reference to the plan of mains, the Pump House is situated at the foot of John Street, being an annex of the City Water Works Main Pumping Station. From this Station a 20-in. cast iron flanged pipe (supported on piles driven to the rock) is carried south about four hundred feet to Lake Street, and there turns east and runs along Lake Street to Bay Street, turning north on Bay Street and running up to Queen Street. Off of this main at each street intersection 12-in. mains are carried east and west, and on the intersections of streets running north and south across these 12-in. mains 8-in. pipes are laid, forming a gridiron of the district. All mains are controlled

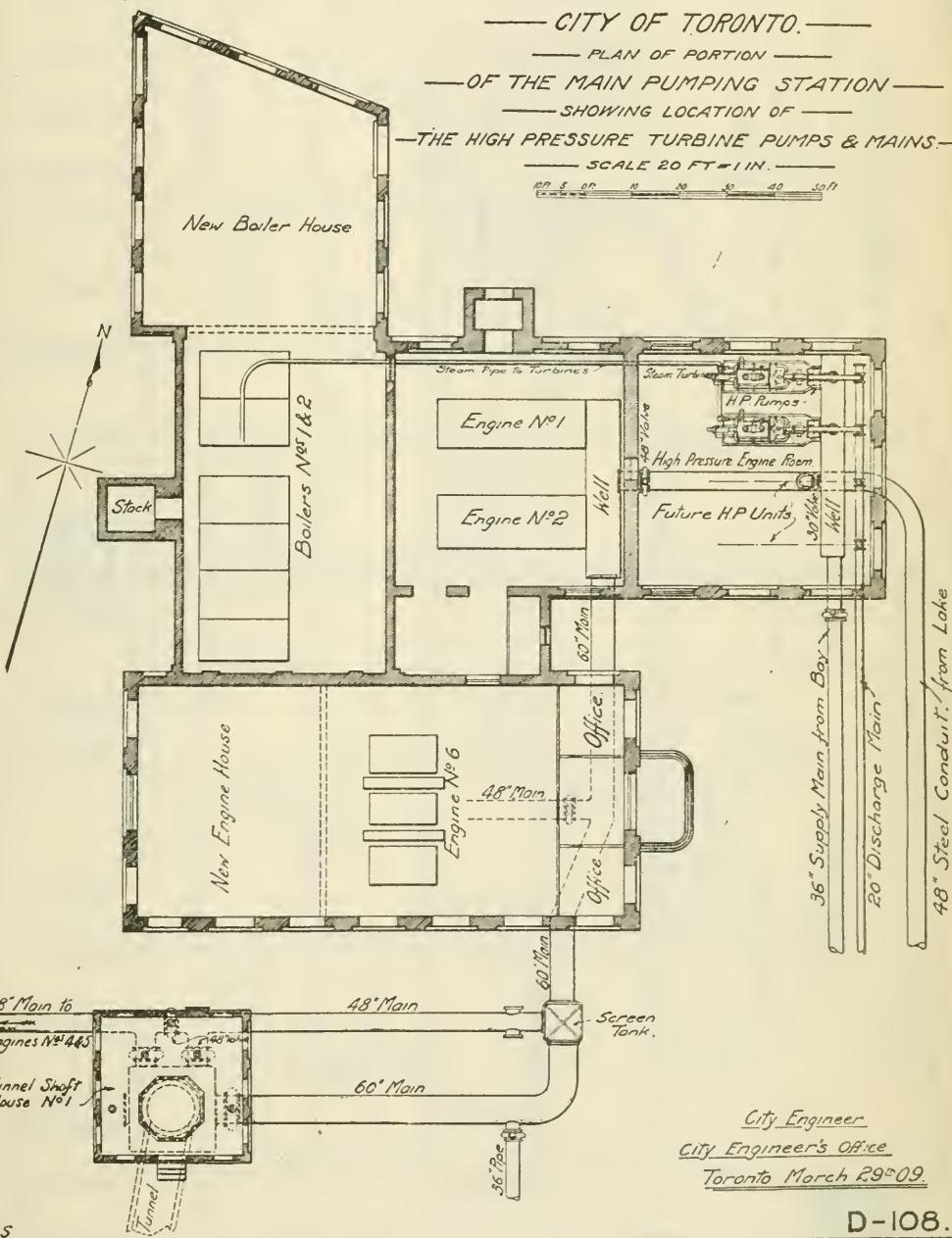


STEAM TURBINES AND CENTRIFUGAL PUMPS

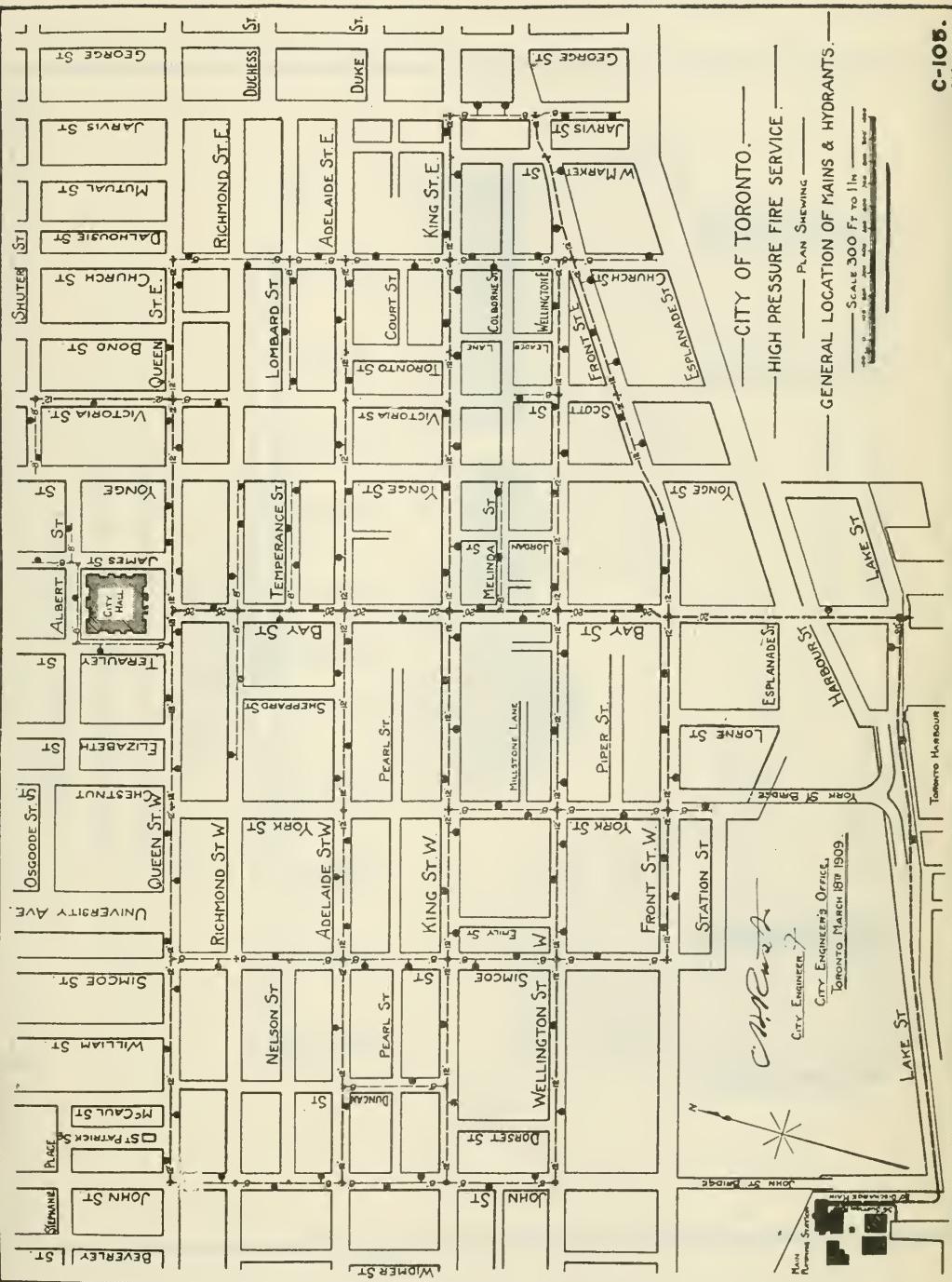


STEAM TURBINES—HIGH PRESSURE FIRE SYSTEM









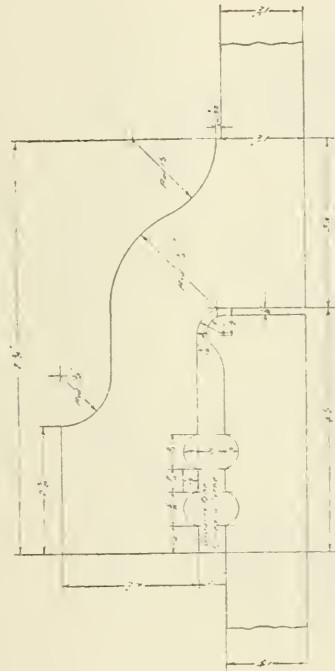


CITY OF TORONTO

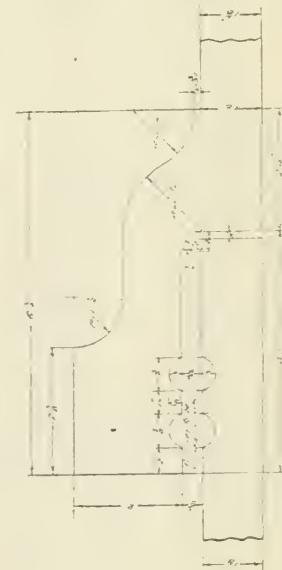
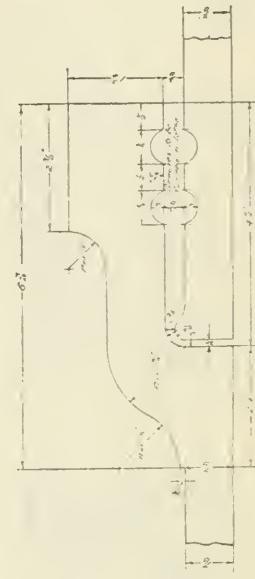
HIGH PRESSURE FIRE SERVICE

DETAILS OF HUB JOINTS FOR VALVES, PIPES AND SPECIALS

SCALE FULL SIZE



Drawing E AS REFERRED TO IN THE SPECIFICATION



CITY ENGINEERS OFFICE  
CITY OF TORONTO  
TORONTO AUGUST 1932



by valves at intersections, and all hydrants are protected by valves. The whole of the pipes, valves and hydrants were tested to 450 lbs. to the square inch after being placed in the ground.

All special connections are of cast steel, and all pipe connections between mains and hydrants are of flanged steel pipe; outside of that the remaining pipes are of cast iron.

Air valves are placed at all high points on the mains.

In the pumping station are installed two 1,000 horse-power Westinghouse-Parsons horizontal steam turbines direct connected to two 2-stage five million gallon turbine pumps. The boiler room contains six 250 horse-power water tube boilers supplying steam at 150 pounds pressure to the square inch. The condensers in the engine room are of the barometric type, the vacuum obtained being 27 inches. No pumps are used for this purpose, only City pressure. The maximum pressure maintained on the mains for fire purposes is three hundred pounds to the square inch. The speed of the turbines, while maintaining this pressure, and delivering five million gallons per twenty-four hours, is 1,500 revolutions per minute. Pressure can be run up to 300 pounds in less than a minute.

On December 28th a test was made of the system by the Engineer of the Fire Underwriters' Association. The point selected for this test was the most easterly on the system, being approximately farthest from the pumps. The following is a record of the streams and resulting pressures at the hydrants.

The standing pressure being 310 pounds at the hydrants, each stream was through 250 feet of 3 $\frac{1}{2}$ -inch hose and a 2-inch nozzle.

With 3 streams the pressure dropped to.....	288 lbs.
" 5 "	262 "
" 7 "	228 "
" 8 "	202 "
" 8 x 1 $\frac{1}{4}$ nozzle at hydrant	182 "

Hydrants used were two hydrants off King Street 12-in. main, and two off Jarvis Street 8-in. main, the Jarvis Street main being connected to the Front Street 12-in. main and King Street 12-in. main.

#### SAND PUMP No. 1.

Sand Pump No. 1 started work on April 18th at St. Andrew's Avenue, and was engaged in filling in the lots and streets at the Island

from St. Andrew's Avenue easterly till August 24th. On August 25th started work at the Royal Canadian Yacht Club, where it was engaged till October 9th. It was then towed to the foot of Oriole Avenue, and was engaged in building up roadway till November 3rd, from where it was taken to Chippewa Avenue, dredging channel until December 3rd. On December 4th started at Clandeboye Avenue and worked there till December 7th. On December 8th towed from Island and started dredging the Water Works Slip.

#### SAND PUMP No. 2.

Sand Pump No. 2 started pumping April 8th at Settling Basin, where it remained till April 13th. It started work at Western Sand Bar on April 14th, filling in lots and streets until June 1st, and then commenced at St. Andrew's Avenue, filling in, working there till June 10th, when it moved to Pawnee Avenue, and worked there till the 15th June. It started work at the Island Pumping Station on June 18th, finishing on June 26th, when it moved over to Hanlan's and started work there June 27th, remaining till August 29th. Then moved to Ward's on August 31st and pumped till December 7th, when it was laid up for the season.

#### SAND PUMP No. 3.

Sand Pump No. 3 started work July 2nd at Ward's Island for testing purposes, and remained there filling in until August 8th, when it was moved to Fisherman's Island and started pumping on August 10th, working till August 17th; then it was moved to the Don August 18th, and remained there working at new channel until September 14th. On September 15th started pumping sand from Weddell & Co. for filling at Ashbridge's Bay; worked there until November 18th. Dredge was towed to Island Park on November 19th, where it worked at channel until December 9th, when it stopped for the season.

Respectfully submitted,

C. L. FELLOWES,

*Deputy City Engineer.*

CITY DREDGE No. 3





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S C H E D U L E S

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WATER WORKS DEPARTMENT

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Note.—For Schedule of "Cash Expenditure on Maintenance Account," etc., see page 216.

For Schedule of "Analysis of Expenditure at Main Pumping Station," see page 216.

### SCHEDULE No. 1.

#### STATEMENT OF WATER PUMPED BY ENGINES NOS. 1 AND 2 FOR THE YEAR 1908.

Month.	No. of Days on which Engines were Working.		Number of Hours Working Each Month.		Number of Strokes for Each Engine per Month.		Quantity of Water Pumped per Month by Each Engine in Imp. Gals. Gross.		Percentage of Slip		Total Quantity Pumped in Imp. Gals. Net.		Average Pressure on Pumps.		Average Level of Water in Well		Total Quantity of Coal Con- sumed per Month by Engines, Nos. 1 and 2.		
	No. 1.	No. 2.	No. 1.	No. 2.	No. 1.	No. 2.	No. 1.	No. 2.	No. 1.	No. 2.	Ft.	In.	Tons.	Lbs.	Ft.	In.	Tons.	Lbs.	
January .....	26	6	h. m. 571 00	h. m. 123 45	439,254	80,071	100,149,912	36,752,589	136,902,501	4	131,426,401	90.6	19 6	489	930				
February .....	21	1	466 05	3 00	364,690	1,904	83,149,320	874,854	84,024,174	4	80,663,208	92.7	20 9	288	110				
March .....	4	5	73 00	101 45	48,653	63,970	11,092,884	29,362,230	40,455,114	4	38,836,914	92.8	19 9						
April .....																			
May .....	2		29 15		17,476		8,021,484	8,021,484	4	7,700,625	91	17 3							
June .....	2		25 10		16,413		7,533,567	7,533,567	4	7,232,225	90	17 1							
July .....	8		154 00		95,627		43,892,793	43,892,793	4	42,137,082	96.5	20 1							
August .....	1		6 25		3,257		1,494,963	1,494,963		1,435,165	86	17 4							
September .....																			
October .....	4		57 45		40,930		18,814,410	18,814,410	4	18,061,834	89.7	20 2							
November .....																			
December .....																			
Totals.....	51	29	1,110 05	501 05	85,2,597	319,510	194,392,116	146,746,890	341,139,066	4	327,493,454	729.3	151 11	777	1,040				
Monthly averages ..	4.2	2.4	92 30	41 45	71,049	26,625	16,199,259	12,228,907	28,428,250	4	26,291,121	91.1	19	64	1,586				



## SCHEDULE No. 2.

## STATEMENT OF WATER PUMPED BY ENGINES Nos. 4 AND 5 FOR THE YEAR 1908.

No. of Days on which Engines were working, Month,	Number of Hours working each Month,	Quantity of Water Pump'd each Month by each Engine—Imperial Gallons, Gross,			Percentage Imp. Gallons Gross	Total Quan- tity Pumped by Nos. 4 & 5 Engines, Imp. Gallons Net.	Average Pump's Pressure on Pump's Lift by Pounds. Ft. In.	Tons. Lbs. 2.5 3 371 1,490					
		No. 4	No. 5	No. 4									
January . . . . .	24	3	5,533 20	5,58 00	1,114,280	122,136	235,113,080	25,648,560	260,761,610	2	235,546,407	91.6	Pt. In.
February . . . . .	24	19	531 45	416 35	958,413	777,144	202,295,143	163,290,240	365,425,383	2	358,116,876	90.9	
March . . . . .	31	31	711 15	737 30	1,139,797	1,289,862	240,497,167	270,871,020	514,368,187	2	501,110,824	93.2	
April . . . . .	27	30	551 10	687 25	851,586	1,226,222	180,317,616	257,506,620	437,824,266	2	129,067,784	93.1	
May . . . . .	28	30	617 35	690 10	1,015,250	1,269,896	211,217,750	266,678,160	480,805,910	2	471,277,992	94.0	
June . . . . .	30	30	715 25	710 45	1,226,968	1,343,085	278,802,168	282,047,850	500,938,098	2	530,119,337	95.5	
July . . . . .	31	26	739 40	573 35	1,306,425	1,068,407	275,655,675	224,365,170	500,021,115	2	490,020,723	94.9	
August . . . . .	31	31	739 25	740 25	1,227,263	1,348,500	258,952,493	283,185,000	512,137,493	2	531,294,744	94.7	
September . . . . .	30	30	716 35	715 35	1,106,285	1,224,873	233,426,135	257,223,330	490,649,465	2	180,836,476	92.3	
October . . . . .	30	30	655 50	685 15	1,012,986	1,181,390	243,740,016	248,721,900	462,161,916	2	153,212,707	94.2	
November . . . . .	30	30	714 05	710 40	1,020,627	1,127,702	215,352,297	236,817,420	452,169,717	2	113,126,323	93.3	
December . . . . .	31	31	739 05	731 45	1,012,536	1,142,802	213,615,096	239,988,420	453,635,516	2	114,560,846	92.9	
Totals . . . . .	347	321	7,985 10	7,460 40	12,995,116	13,125,019	2,712,032,776	2,756,253,990	5,498,286,766	2	5,388,321,036	1,120,6	
Monthly Averages ..	28.9	26.7	665 25	621 43	1,082,951	1,093,751	228,699,398	229,771,165	474,857,230	2	149,026,753	93.3	
											25.9	655	767



## SCHEDULE No. 3.

## STATEMENT OF WATER PUMPED BY ENGINE NO. 6 FOR THE YEAR 1908.

Month.	No. of Days on which Engine Worked.	No. of Hours Working each Month.	Number of Strokes made by Engine each Month.	Quantity of Water Pumped each Month, Imp. Gallons Gross.	Percentage of Water Pumped each Month, Imp. Gallons Net.	Quantity of Water Pumped each Month, Imp. Gallons Net.	Average Pressure on Pump.	Average Lift by Engine.	Total Quantity of Coal used under Boilers each Month.
h. m.					Pounds.	Pt. In.	Tons.	Lbs.	
					94.5	23 9	624	200	
January .....	31	714 00	889,601	170,421,008	7	437,491,538			
February .....	29	661 30	804,725	125,538,580	7	335,730,580	93.0	24 7	611 27.5
March .....	28	632 40	755,416	349,479,844	7	371,516,255	96.6	24 1	638 13.5
April .....	30	719 30	845,199	447,094,874	7	415,802,884	95.4	23 0	536 1,370
May .....	31	711 30	846,286	447,516,036	7	116,189,914	96.9	23 0	507 10
June .....	30	692 50	817,303	432,180,826	7	401,436,539	98.7	24 6	557 9.5
July .....	31	744 00	882,877	466,865,557	7	434,184,783	95.2	24 7	710 675
August .....	31	741 15	884,994	467,484,827	7	435,225,890	98.6	25 4	578 800
September .....	30	720 60	875,798	463,121,982	7	430,743,444	95.6	25 7	612 670
October .....	31	735 20	845,863	452,580,354	7	420,891,730	97.1	24 9	571 220
November .....	30	719 10	819,092	433,135,849	7	102,816,340	96.4	25 0	582 260
December .....	31	744 00	855,505	452,391,044	7	420,723,671	95.9	25 8	614 1,620
Totals .....	363	8,565 45	10,132,989	5,358,324,583	7	4,983,241,865	1,153 9	293 10	7,143 330
Monthly Averages.....	30.2	713 45	844,115	446,527,018	7	415,270,155	96.1	24 6	595 527



Month.	Average Pressure on Suction Mems.	Total Quan- tity of Coal Consumed under Boilers.	Coal Con- sumed for Banking Fires, Raising Steam, etc.	Coal Con- sumed while Pumping.
January.....	21.21	Lbs. Tons. Lbs. 144 211	Tons 11 1,100	Tons 132 Lbs. 1,111
February .....	20.88	131 1,631	10 300	121 1,331
March.....	21.18	139 631	11 1,100	127 1,531
April.....	21.26	124 1,891	10 1,000	114 891
May.....	20.98	122 606	10 1,700	111 906
June.....	21.31	118 1,326	10 1,700	107 1,626
July.....	21.32	133 916	10 1,700	122 1,216
August .....	21.31	130 202	11 400	118 1,802
September.....	18.49	131 1,017	10 1,700	123 1,317
October.....	20.98	127 541	10 1,700	116 841
November.....	21.31	134 931	10 1,000	123 1,931
December.....	21.31	165 1,811	10 1,700	155 111
Totals.....	251.54	1,606 1,714	130 1,100	1,476 614
Monthly Averages .	20.96	133 309	10 1,751	123 651

## SCHEDULE No. 4.

RECORD OF WATER RE-PUMPED AT HIGH LEVEL STATION FOR THE YEAR 1908.

Month.	Number of Hours Engines working,			Number of Revolutions made by Pumps.			Quantity of Water Re-pumped.			Total Quan- tity of Water Re-pumped by all En- gines in Imp. Gallons Gross.	Percentage of Shl.	Total Quan- tity of Water Re-pumped Imp. Gallons Net.	Average Pressure on Force Mains.	Average Pressure on Suction Mains.	Total Quan- tity of Coal Consumed under Boilers.	Coal Con- sumed for Banking Fires, Raising Steam, etc.	Coal Con- sumed while Pumping.			
	No. 1.	No. 2.	No. 3.	No. 1.	No. 2.	No. 3.	No. 1.	No. 2.	No. 3.											
January.....	496 00	744 00		1,763,462	1,742,543		80,237,521	78,414,435		158,651,956	1	157,065,437	Lbs. 58.34	Lbs. 21.21	Tons. 144	Lbs. 211	Tons. 11	Lbs. 1,100	Tons. 132	Lbs. 1,111
February .....	464 00	696 00		1,613,888	1,589,441		73,431,904	71,524,845		144,956,749	1	143,507,182	58.20	20.88	131	1,631	10	300	121	1,331
March.....	496 00	744 00		1,682,368	1,667,943		76,547,744	75,057,435		151,605,179	1	150,089,128	58.22	21.18	139	631	11	1,100	127	1,531
April .....	480 00	720 00		1,633,323	1,536,444		74,316,196	69,139,980		143,456,176	1	142,021,615	58.19	21.26	124	1,891	10	1,000	114	891
May .....	496 00	744 00		1,715,231	1,604,179		78,043,010	72,188,055		150,231,065	1	148,728,755	58.33	20.98	122	606	10	1,700	111	906
June .....	486 00	720 00		1,714,242	1,606,430		77,998,011	72,289,350		150,287,361	1	148,784,488	57.95	21.31	118	1,326	10	1,700	107	1,626
July .....	510 50	744 00		1,874,359	1,667,322		85,283,334	75,479,490		160,762,824	1	159,155,196	57.77	21.32	133	916	10	1,700	122	1,216
August .....	497 30	744 00		1,837,180	1,699,982		83,591,690	76,499,190		160,090,880	1	158,489,972	57.67	21.31	130	202	11	400	118	1,802
September.....	180 00	720 00		1,859,696	1,514,653		84,616,168	68,159,385		152,775,553	1	151,247,798	57.13	18.49	131	1,047	10	1,700	123	1,317
October .....	196 00	744 00		1,817,886	1,663,312		82,713,813	74,849,010		157,562,853	1	155,987,225	57.77	20.98	127	541	10	1,700	116	841
November.....	463 30	691 30	35 30	1,584,078	1,461,105	42,320	72,075,549	65,749,725	5,882,480	143,707,754	1	142,270,677	57.75	21.31	134	931	10	1,000	123	1,931
December .....	314 00	744 00	188 00	1,132,214	1,516,794	349,604	51,515,737	68,255,730	48,594,856	168,366,423	1	165,682,750	56.39	21.31	165	1,811	10	1,700	155	111
Totals.....	5,679 50	8,755 30	223 30	20,227,927	19,280,148	391,924	920,370,677	867,606,660	54,477,136	1,842,454,773	1	1,824,030,252	608.71	251.54	1,606	1,714	130	1,100	1,476	614
Monthly Averages ..	473 19	729 37	18 37	1,685,660	1,606,679	32,660	76,697,556	80,633,888	1,539,786	153,537,897	1	152,002,519	57.81	20.96	133	309	10	1,751	123	951

SD 1908.

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1908.

MON	Coal.			
	Quantity imped.	Quantity Consumed.	Total Consumption.	
Gals. Net.	Tons. Lbs.	Tons.	Lbs.	
January	489 930			288 68
	371 1,490			276 36
	624 200			265 84
	4,464,346		1,485 620	94 53
February	288 110			75 752
	527 940			356 62
	611 275			84 297
	4,530,964		1,426 1,325	359 19
March	724 1,250			366 00
	638 135			
	1,493,993		1,362 1,385	
April	631 1,230			
	536 1,370			
	4,870,662		1,168 600	
May	674 1,250			
	507 010			
	5,168,531		1,181 1,260	
June	780 525			
	557 095			
	9,288,101		1,337 620	
July	722 470			
	710 675			
	6,342,588		1,432 1,145	
August	767 420			
	578 800			
	7,955,799		1,345 1,220	
Septemb	681 110			
	612 670			
	1,539,920		1,293 780	
October	703 710			
	571 220			
	2,174,271		1,274 930	
Novemb	616 360			
	582 260			
	5,942,663		1,198 620	
Decembe	664 450			
	614 1,620			
	5,284,517		1,279 070	
	Total 9,056,355		15,785 575	
	Dail 1,232,449		43 258	

\* A larger percentage was allowed for slip in 1894 and 1895, than in other years.

## SCHEDULE NO. 5.

COMPARATIVE STATEMENT OF COAL CONSUMED AND WATER PUMPED BY MONTHS FOR THE YEARS 1907 AND 1908.

MONTHS.	1907.							1908.						
	Engine Nos.	Water.			Coal.			Engine Nos.	Water.			Coal.		
		Quantity Pumped.	Total Quantity Pumped.	Quantity Consumed.	Total Consumption.	Quantity Pumped.	Total Quantity Pumped.		Quantity Pumped.	Total Quantity Pumped.	Quantity Consumed.	Total Consumption.	Tons.	Lbs.
January	1 and 2	Imp.Gals. Net.	Imp.Gals. Net.	Tons.	Lbs.	1 and 2	Imp.Gals. Net.	Imp.Gals. Net.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.
	4 and 5	423,658,769		25	140	4 and 5	131,426,401	4 and 5	255,546,407		489	930		
	6	377,916,507		639	1,080	6	437,491,558	6	371,14,400		371	1,400		
February	1 and 2	1,308,903		24	520	1,237	1,830	1 and 2	80,663,208		288	110	1,485	620
	4 and 5	411,309,866		597	1,000	4 and 5	358,116,876	4 and 5	527	940				
	6	340,203,226		538	930	6	395,750,880	6	611	275				
March	1 and 2	762,821,995		61	220	1,160	450	1 and 2	38,836,914		724	1,250	1,426	1,325
	4 and 5	498,275,422		714	650	4 and 5	501,140,824	4 and 5	638	135				
	6	352,803,636		509	110	6	371,516,255	6	911,493,993					
April	1 and 2	9,584,756		159	1,380	1,284	980	1 and 2	429,067,781		631	1,230	1,362	1,385
	4 and 5	354,690,192		531	1,530	4 and 5	415,802,881	4 and 5	536	1,370				
	6	366,649,482		516	960	6	416,189,914	6	844,870,662					
May	1 and 2	57,251,129		189	500	1,207	1,870	1 and 2	7,700,625		674	1,250	1,168	600
	4 and 5	354,690,192		642	1,170	4 and 5	471,277,992	4 and 5	507	010				
	6	333,352,502		471	750	6	416,189,914	6	895,168,531					
June	1 and 2	58,902,869		167	390	1,303	420	1 and 2	7,232,225		780	525	1,181	1,260
	4 and 5	440,787,499		678	340	4 and 5	530,119,337	4 and 5	537	095				
	6	333,352,502		486	220	6	401,936,539	6	939,288,101					
July	1 and 2	51,806,760		21	1,760	1,331	950	1 and 2	42,137,082		722	470	1,337	620
	4 and 5	198,873,781		811	1,150	4 and 5	490,020,723	4 and 5	710	675				
	6	321,824,814		559	240	6	434,184,743	6	966,342,588					
August	1 and 2	568,243,281		799	130	1,392	1,150	1 and 2	1,435,165		767	420	1,432	1,145
	4 and 5	575,831,245		547	850	4 and 5	531,294,744	4 and 5	578	800				
	6	368,202,946		—	—	6	435,225,890	6	967,955,799					
September	1 and 2	953,442		—	—	1,346	9-0	1 and 2	480,836,476		681	110	1,345	1,220
	4 and 5	517,275,924		765	1,860	4 and 5	430,703,414	4 and 5	612	670				
	6	368,487,009		560	230	6	420,899,730	6	911,539,920					
October	1 and 2	120,103,252		258	430	1,326	090	1 and 2	18,061,834		703	710	1,293	780
	4 and 5	560,508,318		772	450	4 and 5	453,212,707	4 and 5	571	220				
	6	268,001,499		458	1,660	6	420,899,730	6	892,174,271					
November	1 and 2	414,201,969		9	080	1,489	540	1 and 2	443,126,323		616	360	1,274	930
	4 and 5	428,899,247		610	265	4 and 5	402,816,340	4 and 5	582	260				
	6	451,095,108		548	655	6	420,723,671	6	845,942,663					
December	1 and 2	843,101,216		11	1,510	1,167	1,000	1 and 2	444,560,846		664	450	1,198	620
	4 and 5	393,653,541		584	1,845	4 and 5	420,723,671	4 and 5	614	1,620				
	6	451,095,108		540	985	6	863,284,517	6	29,232,439					
Totals		10,356,547,168		15,384	63				10,699,056,355				15,785	575
Daily averages		28,374,101		42	294				29,232,439				43	258

## SCHEDULE No. 6.

COMPARATIVE STATEMENT Showing Number of Gallons Pumped, Quantity and Cost of Fuel, Etc., from 1876 to 1908, INCLUSIVE.

## CITY ENGINEER'S REPORT.

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YEAR.	Total Water Pumped Imd. (gals.)	Quantity of Fuel, Lbs.	Total Cost of Fuel.	Water Pumped per Pound of Fuel.	
				Average Daily Quantity of Water Pumped Imp. Gals.	Average Daily Consumption of Coal. Lbs.
1876	1,625,139,876	6,998,282	\$19,645.75	4,451,202	19,093
1877	2,633,433,932	10,407,932	25,556.29	7,214,887	28,515
1878	1,417,370,918	8,120,000	15,196.20	3,883,208	22,246
1879	1,619,104,512	10,872,211	19,313.07	4,411,245	17,455
1880	1,785,859,706	11,691,808	28,755.72	4,879,422	14,09
1881	1,910,430,419	12,391,874	31,410.04	5,234,056	152.17
1882	2,108,933,115	11,685,556	30,170.64	5,777,899	33,953
1883	2,809,965,184	17,266,679	43,529.08	7,698,511	232.02
1884	3,049,442,082	19,920,782	52,525.56	5,960,324	162.74
1885	3,537,482,595	18,644,165	46,589.27	9,691,733	183,00
1886	4,134,376,998	19,285,371	41,979.32	11,327,060	180,73
1887	4,417,938,169	23,283,900	50,051.85	12,103,910	54,081
1888	4,041,964,511	20,457,435	46,600.77	11,973,875	214.37
1889	4,148,781,634	19,231,910	44,135.10	11,366,525	160,00
1890	5,249,760,226	31,615,830	56,239.99	14,382,904	52,690
1891	6,207,656,403	29,300,210	60,012.77	8,067,275	212.96
1892	6,639,925,465	34,565,875	71,805.25	18,246,371	80,291
1893	6,616,021,488	26,013,840	64,702.86	18,208,278	211.86
1894	6,389,492,142	26,892,145	54,902.85	10,053,103	211.86
1895	6,639,680,218	21,178,874	40,221.85	18,190,302	58,024
1896	6,718,187,980	18,606,504	25,307.90	18,527,836	313.5*
1897	6,723,757,630	20,711,250	26,880.50	18,421,253	56,743
1898	7,136,334,102	22,100,145	27,572.00	19,551,600	322.64
1899	7,834,248,217	24,682,935	26,684.57	21,436,569	60,548
1900	8,064,384,595	24,148,505	38,668.54	22,094,204	316.99
1901	8,209,298,465	26,292,640	39,402.87	22,163,831	67,642
1902	7,933,916,325	23,769,930	39,260.22	21,391,140	333.95
1903	8,755,658,003	30,260,615	54,275.93	23,933,309	94,553
1904	9,076,711,575	32,843,325	55,784.05	24,799,758	265,84
1905	9,174,732,461	34,512,065	49,644.31	25,136,253	356,62
1906	9,839,486,414	27,649,405	43,542.28	27,012,291	75,752
1907	10,365,47,168	30,768,636	48,380.46	28,374,101	84,297
1908	10,639,056,355	31,750,575	49,226.46	29,232,449	366,00

\* A larger percentage was allowed for slip in 1891 and 1895, than in other years.

SCHEDULE No. 7.  
QUANTITY OF WATER PUMPED AND QUANTITY CONSUMED DURING EACH MONTH OF 1904, WITH AMOUNT OF DAILY CONSUMPTION.

Month.	Total Quantity Pumped per Month in Imperial Gallons	Quantity Stored in Reservoir at end of each Month Imperial Gallons	Quantity Consumed during each Month. Imperial Gallons	Average Daily Consumption of Water: Imperial Gallons	Average Monthly Consumption of Coal at Main Pumping Station Lbs.
				Tons.	Lbs.
Stored in Reservoir on 31st December, 1907.....	28,120,960	830,718,831	830,718,831	26,719,962	1,185
January .....	21,786,475	18,834,088	837,483,351	28,578,736	620
February .....	27,909,480	902,418,601	29,110,277	1,426	1,325
March .....	20,005,423	852,774,719	28,425,823	1,362	1,385
April .....	30,951,624	881,222,330	28,523,301	1,168	600
May .....	26,043,256	944,196,469	31,473,215	1,181	1,260
June .....	16,335,911	975,049,933	31,485,483	1,357	620
July .....	21,786,475	962,565,235	31,048,556	1,432	1,145
August .....	17,674,658	915,651,727	30,521,724	1,345	1,220
September .....	28,755,397	881,093,542	28,422,372	1,293	780
October .....	845,942,663	845,942,663	28,198,088	1,274	930
November .....	865,284,517	871,091,746	28,119,088	1,193	620
December .....	10,699,056,353	10,704,829,147	351,006,625	1,279	70
<b>Totals</b> .....	891,588,029	892,069,095	29,250,552	15,785	575
<b>Averages</b> .....				1,315	881

COMPARATIVE STATEMENT SHOWING INCREASE OF DEPARTMENT YEARLY, 1875 TO 1908, INCLUSIVE.

SCHEDULE No. 8.

CITY ENGINEER'S REPORT.

47

Year.	Average Daily Consumption of Water.	Population.	Average Degree of Water.	Consumption of Water for all Purposes.	Total Number of Houses in Service in each year.	Number of houses per year in each year.	Total Number of houses in use each year.	Total Miles of Meters in use each year.	Miles.	Average Pressure on Pumps.				
										No. 1, English & Hunter Engine.	No. 2, English & Hunter Engine.	No. 3, English & Hunter Engine.	No. 4, English & Hunter Engine.	No. 5, English & Hunter Engine.
1875 ..	3,121,000	68,078	49.86	2,769	842	.....	.....	49.810	88.10	.....	.....	.....	.....	.....
1876 ..	4,451,202	71,693	62.09	3,512	740	.....	.....	80.250	88.78	97.51	.....	.....	.....	.....
1877 ..	2,812,000	67,386	41.74	4,518	1,006	.....	.....	107.570	83.33	97.69	.....	.....	.....	.....
1878 ..	3,383,208	70,867	54.79	6,707	2,189	28	.....	110.210	89.65	96.64	.....	.....	.....	.....
1879 ..	4,411,245	73,813	59.76	8,568	1,861	47	.....	111.290	95.28	99.04	.....	.....	.....	.....
1880 ..	4,879,422	75,110	61.96	10,119	2,341	66	.....	113.312	98.92	99.52	.....	.....	.....	.....
1881 ..	5,254,056	76,934	68.03	12,236	2,654	79	.....	115.518	96.32	100.78	.....	.....	.....	.....
1882 ..	5,777,899	81,372	71.01	14,062	1,826	91	.....	116.116	94.85	101.66	.....	.....	.....	.....
1883 ..	7,638,511	91,796	83.87	16,276	1,706	109	.....	131.552	94.27	105.19	.....	.....	.....	.....
1884 ..	9,960,224	105,211	91.66	18,363	2,087	130	.....	138.301	99.14	107.03	.....	.....	.....	.....
1885 ..	9,706,127	111,800	86.82	20,797	2,341	140	195	113.257	98.84	106.45	103.88	.....	.....	.....
1886 ..	11,314,337	115,403	95.81	23,643	2,936	152	256	156.012	104.88	101.92	101.67	.....	.....	.....
1887 ..	12,060,616	126,169	95.59	26,893	3,193	176	332	165.804	102.88	102.36	101.57	.....	.....	.....
1888 ..	14,069,781	166,809	66.36	29,883	3,465	174	897	182.629	93.44	92.36	91.57	.....	.....	.....
1889 ..	11,378,912	172,000	65.02	31,056	3,288	222	1,347	212.332	94.25	91.82	94.92	.....	.....	.....
1890 ..	14,434,722	189,400	78.02	36,192	4,191	229	1,479	220.257	93.55	93.58	93.91	.....	.....	.....
1891 ..	17,007,727	188,991	90.03	38,250	2,111	230	1,544	237.967	93.33	93.66	93.91	.....	.....	.....
1892 ..	18,216,371	188,294	96.51	39,401	1,200	258	1,535	242.564	94.18	94.18	94.37	.....	.....	.....
1893 ..	18,208,278	188,304	96.58	39,927	526	300	1,600	244.964	94.18	94.18	94.37	.....	.....	.....
1894 ..	18,036,861	188,991	95.58	40,581	319	278	1,580	245.478	94.88	94.88	95.24	95.24	95.24	95.24
1895 ..	18,192,063	190,900	95.74	40,683	3,57	.....	1,500	246.88	94.88	94.88	95.05	95.05	95.05	95.05
1896 ..	18,527,836	195,987	91.53	40,951	313	230	1,553	249.627	91.5	94.5	94.5	94.5	94.5	94.5
1897 ..	18,318,722	195,387	93.77	41,315	364	230	1,553	252.616	95.1	95.1	95.1	95.7	95.7	95.7
1898 ..	19,576,957	200,000	97.88	41,838	523	230	1,580	255.625	95.3	95.3	95.3	95.9	95.9	95.9
1899 ..	21,436,509	225,000	95.27	42,552	744	230	1,598	257.613	94.9	94.9	94.9	94.9	94.9	94.9
1900 ..	22,094,204	235,000	91.01	13,242	690	230	1,700	258.774	94.0	94.0	94.0	93.5	93.5	93.5
1901 ..	22,507,266	235,000	45.77	1,033	4,275	239	1,800	260.324	93.8	93.8	93.8	93.2	93.2	93.2
1902 ..	21,490,110	236,000	88.57	45,697	1,319	241	1,830	261.166	91.1	91.1	91.1	92.6	92.6	92.6
1903 ..	23,923,847	245,000	93.60	48,529	1,102	241	1,844	266.955	94.6	94.6	94.6	93.2	93.2	93.2
1904 ..	24,803,178	250,000	99.20	50,847	2,036	245	2,013	272.853	94.3	94.3	94.3	93.1	93.1	93.1
1905 ..	25,014,681	270,000	54.02	3,185	2,036	250	2,331	286.619	94.9	94.9	94.9	93.4	93.4	93.4
1906 ..	26,396,007	295,000	91.51	50,635	4,041	256	2,513	293.552	90.1	90.1	90.1	89.1	89.1	89.1
1907 ..	28,291,468	310,000	91.2	62,031	3,361	264	2,587	305.597	91.1	91.1	91.1	91.9	91.9	91.9
1908 ..	29,205,552	315,000	92.8	65,303	3,672	515	2,768	323.743	91.1	91.1	91.1	93.3	93.3	93.3

## SCHEDULE NO. 9.

RECORD OF GAUGING AT ROSEHILL RESERVOIR FOR EACH MONTH OF 1908.

Month.	1908.		Elevation of Lowest Water Above Zero.		Elevation of Highest Water Above Zero.		Average Depth in Reservoir.		Average Contents in Imperial Gallons.
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	
January .....	206	9	215	11	212	7	16	7	24,404,797
February .....	206	3	213	0	208	6	12	6	14,829,506
March .....	209	5	215	5	212	9	16	9	24,811,350
April.....	210	9	216	9	214	0	18	0	27,909,480
May .....	211	2	215	6	213	3	17	3	26,043,256
June .....	211	7	216	3	213	11	17	11	27,702,122
July .....	208	11	216	6	213	2	17	2	25,835,897
August.....	208	10	216	2	213	0	17	0	25,421,180
September .....	203	5	212	7	207	10	11	10	13,337,330
October .....	209	7	216	9	214	2	18	2	28,332,439
November .....	213	1	216	10	214	8	18	8	29,601,314
December .....	210	8	215	5	213	0	17	0	25,421,180
Averages .....					212	7	16	7	24,470,821

NOTE.—The average depth of water in the Reservoir for the year was 16 ft. 7 in., equal to an elevation of 212 ft. 7 in. above zero.

## SCHEDULE No. 10.

## STATEMENT OF MAINS LAID DURING THE YEAR 1908.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
<b>20-IN. MAIN:</b>			
Arthur St.....	North ....	From 30 in. main Bathurst St. to Shaw St	3,353
Shaw St.....	Centre ....	" Arthur St. to Argyle St.....	941
Argyle St.....	South ....	" Shaw St. to Gladstone Ave.....	2,919
Gladstone Ave.....	East ....	" Argyle St. to Alma Ave.....	93
Alma Ave.....	South ....	" Gladstone Ave. to Dufferin St.....	438 $\frac{1}{2}$
Dufferin St.....	West ....	" Alma Ave. to Alma extension.....	503
Alma Ave. exten sion.....		Across G.T.R. & C.P.R. tracks to Earn bridge Ave.....	610 $\frac{3}{4}$
Earnbridge Ave.....	North ....	From C. P. R'y fence to Brock Ave.....	433
Brock Ave.....	East ....	" Earnbridge Ave. to Maple Grove Ave.	156
Maple Grove Ave.....	South ....	" Brock Ave. to O'Hara Ave.....	514
O'Hara Ave.....	East ....	" Maple Grove Ave. to Marion St.....	285 $\frac{1}{2}$
Marion St.....	South ....	" O'Hara Ave. to Macdonell Ave.....	1,012 $\frac{1}{2}$
Macdonell Ave.....	East ....	" Marion St. to Pearson Ave.....	418 $\frac{1}{2}$
Pearson Ave.....	South ....	" Macdonell Ave. to Roncesvalles.....	2,305 $\frac{1}{2}$
Dupont St.....	South ....	" St. George St. to Kendall Ave.....	1,607
" " .....	North ....	" Kendall Ave. to Christie St.....	3,408
" " .....	South ....	" Christie St. to Shaw St.....	1,337
Shaw St.....	East ....	" Dupont St. to Burnfield Ave.....	201
Burnfield Ave.....	North ...	" Shaw St. to Ossington Ave.....	706 $\frac{1}{2}$
Ossington Ave.....	East ....	" Burnfield Ave. to Van Horne Ave	387 $\frac{1}{2}$
Van Horne Ave.....	South ....	" Ossington Ave. to Dufferin St.....	2,731
		Total.....	23,972
<b>16-IN. MAIN:</b>			
Dominion Radiator Company's W'ks.....		From Dufferin St. w&s. to Van Horne Ave	1,460 $\frac{3}{4}$
Royce Ave.....	South ....	" Dominion Radiator Co's. Works to west City limits.....	3,698
		Total.....	5,158 $\frac{3}{4}$
<b>12-IN-SUB MAINS :</b>			
Boulevard Ave.....	South ...	Across Dundas St. to Roncesvalles Ave.....	130
Carlaw Ave.....	East ...	From 860 ft. n. of Queen St. to Gerrard St	1,480
Lansdowne Ave.....	East ....	" Queen St. to 2,270 ft. north.....	2,316 $\frac{1}{2}$
" " .....	West ....	" 16-in. main n. across Royce Ave.....	63
Osler Ave.....	West ....	" 16 in. to 12-in. mains n. across Royce Ave.....	33
Roncesvalles Ave.....	West ....	" Queen St. n. to Boulevard Ave.....	5,593
St. Clair Ave.....	North ....	" 185 ft. e. of Oriole Rd. to 36 ft. e. of Marlboro' Crescent.....	353
Yonge St .. . . .	East ....	" St. Clair Ave. to Clarence Ave.....	769
		Total.....	10,737 $\frac{1}{2}$

SCHEDULE No. 10.—*Continued.*

## STATEMENT OF MAINS LAID DURING THE YEAR 1908.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
<b>8-IN. SUB-MAINS:</b>			
Exhibition Grounds Manufacturers' Bld	East ....	From 12-in. main south along e. side of Manufacturers' Bldg. ....	318
" "	South ....	Along s. side of Manufacturers' Bldg. ....	486
" "	West ....	" w. side of Manufacturers' Bldg. north to 12-in. main.....	265
		Total.....	1,069
<b>6-IN. SUB-MAINS:</b>			
Ada St .....	West.....	From Wallace Ave. to 465 ft. south .....	512½
Awde St.....	North ....	" Brock Ave. to 288 ft. east.....	338
Baker St.....	W. & N...	" Clinton Ave. 330 ft. n., thence on n. side 711 ft. west .....	1,060
Balmoral Ave....	North ...	" Yonge St. 1,226½ ft w. to old main..	1,273
Barrett Ave.....	West....	" Chelsea St. 162 ft. south.....	213
Beatrice St.....	West ....	" Bloor St. 504½ ft. south.....	521½
Bedford Road....	West ....	Extension opp. Chicora Ave. to 24 ft. south of Chicora Ave. ....	40
Berryman St ....	North ....	" Hazleton Ave. to Davenport Rd....	682½
Boswell Ave.....	North ....	From Avenue Rd. 633½ ft. w., thence to connect with 4-in. main on south side	710
Boulbee Ave.....	South ....	" Jones Ave., 625 ft. east .....	675
Clarence Ave.....	North ....	" Yonge St., 885 ft., east .....	906
Clifford St.....	North ....	" 62 ft. e. of Stafford St., 180 ft. east..	180
College St.....	North ....	" 948 ft. w. of Sorauren Ave. w. to Roncesvalles Ave.....	470
Constance Ave....	North ....	" 12 in. main on Roncesvalles Ave. to 14 ft. w. of Ronces-valles Ave ..	30
Dawson Ave.....	North ....	Extension to Leslie St. main .....	18
DeLisle Ave.....	North ....	From Yonge St. to Marlboro' Cres.....	1,168
Don Esplanade....	West ....	" King St., 331 ft. south to old'main..	394
Dupont St.....	North ....	" Christie St., 134 ft. east.....	172
Duncan St.....	East ....	Jog in Pearl St. main.....	12
Edwin St.....	West ....	From Ruskin Ave., 205 ft. n. to old main	212
Elm Grove Ave....	East ....	" King St. to Queen St.....	1,255
Emerson Ave.....	West ....	" Lappin Ave., 269 ft. north .....	286
" .....	West ....	Across Royce Ave.....	90
Empress Cres .....	South ....	From 620 ft. w. of Dowling Ave., 64 ft. w.	64
" .....	South ....	" Dowling Ave. to Jameson Ave.....	752
" .....	South ....	" Jameson Ave. to Starr Ave.....	436
Endean Ave.....	North ....	" Jones Ave. to Leslie St .....	735
Farnham Ave.....	North ....	" Yonge St., 1,232½ ft. w. to old main.	1,277
Fenwick Ave.....	East ....	" 200 ft. s. of Danforth Ave., 425 ft. s.	425
Fern Ave. ....	North ....	" Roncesvalles Ave. to Sunnyside Ave	585
Follis Ave.....	North ....	" Euclid Ave., 144 ft. w.....	144
Foxbar Rd.....	S. and E.	" Avenue Rd. to St. Clair Ave .....	1,426
Franklyn Ave....	West ....	" 16 ft. s. Antler Ave. to Ruskin Ave..	305
Fraser Ave.....	West ....	" 214 ft. s. of Liberty St., 549 ft. s....	549

SCHEDULE No. 10.—*Continued.*

## STATEMENT OF MAINS LAID DURING THE YEAR 1908.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
Frizzell Ave.....	North ....	From Pape Ave., 623 ft. e.....	670
Galley Ave.....	South ....	" Sorauren Ave., 438½ ft. e.....	482½
" .....	South ....	" 185 ft. w. of Roncesvalles Ave., 345 ft. w.....	345
Garden Ave.....	North ....	" Roncesvalles Ave., 348 ft. w.....	354
Garnet Ave.....	North ....	" Shaw St., 104 ft. e. to old main .....	153
Geoffrey St.....	North ....	" 643 ft. w. of Sorauren Ave., 427 ft. w., thence s. to 6-in. main on s. s. Roncesvalles Ave. to Sunnyside Ave .....	475
" .....	North ....	" Roncesvalles Ave. to Sunnyside Ave .....	614½
Glen Rd.....	West ....	" 240 ft. n. of Howard St., 108 ft. n..	108
Grace St.....	West ....	" Bloor St., 388 ft. s.....	404
Gwynne Ave.....	East ....	" Queen St. to King St.....	1,254
Hampton Ave.....	West ....	" 686 ft. s. of Danforth Ave. to Wolfrey Ave .....	129
Harbord St.....	South ....	" 200 ft. w. of Bathurst St. to Clinton St.....	1,424
Havelock St.....	West ....	" Sylvan Ave. to 48 ft. s.....	48
" .....	West ....	" 220 ft. s. of Hepbourne St., 140 ft. s. ....	140
Hewitt Ave.....	North ....	" 475 ft. w. of Roncesvalles Ave. w. to old main .....	108
High Park Blvd..	North ....	Across Roncesvalles Ave. connecting 12 and 6-in. mains and from Roncesvalles Ave., 12 ft. w.....	68
Howard Park Ave.	South ....	From 710 ft. w. of Roncesvalles Ave., 180 ft. w.....	180
Indian Grove ....	East ....	" 209 ft. s. of Ridout Ave. to 522 ft. n. of Ridout Ave.....	799
Irene St.....	North ....	" Carling Ave., 203 ft. e.....	214
Jackes Ave.....	North ....	" Yonge St., 649 ft. east .....	669
Jameson Ave.....	East ....	" King St. to Springhurst Ave.....	1,173½
" .....	West ....	Jog at Empress Cres .....	78
John St.....	West ....	From King St. to Adelaide St.....	415
" .....	West ....	" Adelaide St. to Queen St.....	730
Lansdowne Ave..	West ....	" 510 ft. n. of Lappin Ave., n. to Royce Ave.....	140
Leslie St.....	West ....	" Dawson Ave. to Queen Victoria Ave	105
Logan Ave.....	West ....	" 150 ft. s. of Danforth Ave., 324 ft. s.	324
Lovatt Pl.....	North ....	" Sumach St., 274 ft. east.....	319
Lowther Ave.....	North ....	" Avenue Rd., 622 ft. w., thence s. to 4 in. main.....	698½
Lucas St.....	North ....	" 1,045 ft. w. Sorauren Ave., 122 ft. w.	122
Maple Ave.....	West ....	" Dale Ave., 160 ft. north.....	170
Marion St.....	North ....	" Roncesvalles Ave. to Sunnyside Ave	587½
Marlboro' Cres....	East ....	" St. Clair Ave. to Heath St.....	780
Marmaduke Ave....	North ....	" Roncesvalles Ave. to Sunnyside .....	617
Melbourne Ave....	South ....	" Cowan Ave. to Dufferin St. ....	1,257½
Morrow Ave.....	South ....	" 244 ft. e. of Dundas St., 20 ft. e.....	20
Neepawa Ave....	South ....	" Lynd Ave., 137 ft. w.....	155
" .....	South ....	Across Roncesvalles Ave. from 12-in. main to 12 ft. e. of Roncesvalles Ave. ....	72

SCHEDULE No. 10.—*Continued.*

## STATEMENT OF MAINS LAID DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street	Location.	Length in Feet.
Oriole Rd.....	West .....	From 450 ft. s. of Heath St., 280 ft. s., to St. Clair.....	280
Parkway Ave.....	North .....	" 420 ft. s.w. of Dundas St., 362 ft. s.w.	362
Pearl St. ....	North .....	" Simcoe St., 196 ft. w.....	230
" .....	South .....	" Duncan St. to John St.....	483½
Pearson Ave. ....	North .....	" Roncesvalles Ave., 41½ ft. w.....	421½
Pendrith Ave. ....	North .....	" 470 ft. w. of Christie St., 48 ft. w.....	48
Pleasant Ave. ....	North .....	" Yonge St., 630 ft. e.....	650
Powell Ave. ....	West.....	" Dale Ave., 157 ft. n. to old main.....	167
Queen Victoria Ave	South .....	" Leslie St., 464 ft. e.....	512
Radford Ave. ....	North .....	" 364 ft. w. of Alhambra Ave., 180 ft. w.	180
Ridout Ave. ....	North .....	" 272 ft. w. of Indian Rd. to Indian Gr.	130
Rosehill Ave. ....	North .....	" Yonge St., 1,318 ft. e.....	1,338
Rowanwood Ave. ....	North .....	" 422 e. of Yonge St. to Scarth Rd....	1,266
Rusholme Rd. ....	East .....	" 480 ft. n. of St. Anne's Rd. to College St.....	238
Ruskin Ave. ....	North .....	" 330 ft. w. of Perth Ave. to Edwin Ave.	430
Russill Hill Rd. ....	West .....	" 355 ft. n. of Clarendon Ave., 204 ft. n.	204
Scarth Rd. ....	East .....	" Chestnut Park Rd., 718 ft. n.....	730
Seaton Sq. ....	S. & E. ....	" Palmerston Ave., 85 ft. w., thence southerly 12 ft. to old main.....	97
Shanley Ave. ....	North .....	" 150 e. of Salem Ave. to Bartlett Ave.	168
" .....	North .....	" 138 ft. e. of Hamburg Ave., 48 ft. e..	48
Shaw St. ....	West .....	" 138 ft. n. of Shaw Pl. to Melville Ave.	89
" .....	West.....	" 1,190 ft. n. of Bloor St. extn., 134 ft.n.	134
Shaw Pl. ....	North .....	" 449 ft. w. of Shaw St. to Ossington Ave. ....	203
Spencer Ave. ....	East .....	" King St. to Springhurst Ave. ....	1,490
Sparkhall Ave. ....	North .....	" 340 ft. e. of Broadview Ave., 100 ft e.	100
Springhurst Ave. ....	West .....	" 559 ft. s. of King to 616 ft. n. of Jameson Ave. ....	172
" .....	North .....	" Close Ave. to Jameson Ave. ....	406
Sproatt Ave. ....	North .....	" 92 ft. e. of Jones Ave., 208 ft. e. ....	208
Stonehouse Cres. ....	South .....	" 113 ft. e. of Dufferin to Gladstone Ave. ....	246½
Sunnyside Ave. ....	East .....	" Marion St., 270 ft. s. ....	319
St. Clair Ave. ....	North .....	" Yonge St., 1,080 ft. e. ....	1,100
St. Clarens Ave. ....	West .....	Extn. n. to Royce Ave., 62 ft. and across Royce .....	140
Tennis Cres. ....	North .....	From Broadview Ave., 274 ft. e. ....	328
Thorold Ave. ....	North .....	" Allianbra Ave., 379 ft. w. ....	397
Tyndall Ave. ....	East .....	" King St., 762 ft. s., thence w. to 4 in. main on w.s. ....	808½
Ward Ave. ....	West .....	" Connection s. from 16 in. main.....	24
Wallace Ave. ....	North .....	From 255 ft. w. of Perth Ave., 338 ft. w. ....	338
Walter St. ....	North .....	" Roncesvalles Ave. to Sunnyside Ave.	569
Warren Rd. ....	West .....	" 30 ft. s. of Balmoral Ave., 108 ft. s. ....	108
Whitney Ave. ....	South .....	" Glen Rd., 590 ft. e. ....	617
Wineva Ave. ....	West.....	" Queen St., 206 ft. n. ....	218

SCHEDULE No. 10—*Continued.*

## STATEMENT OF MAINS LAID DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.	Length in Feet.
Wolfrey Ave. ....	North ....	From 630 ft. w. of Logan Ave. to Hampton Ave. ....	200
Wright Ave. ....	North ....	" Roncevalles Ave. 566 ft. w. ....	562
Yonge St. ....	East ....	" a point 150 ft. n. of Woodlawn Ave., across Yonge St. 25 ft. to e.s., then n. to St. Clair Ave. ....	1,435½
		Total .....	52,545½
<b>4-IN. SUB-MAINS:</b>			
Castle Frank Cres. S. & E. ....		From Castle Frank Ave. e. and n. 696½ ft..	747½
Cecil St. ....	South ....	" Beverley St. 122 ft. e. ....	142
Harriett St. ....	South ....	" Leslie St., 512½ ft. e. ....	528½
Hastings Ave. ....	East ....	" Harriett St., 415½ ft. s. ....	463½
Kensington Place... S. & W....		" Kensington Ave., westerly 114 ft from, thence 124 ft. s. and 62 ft. n.	345½
Poplar Plains Rd.. East.....		" 229 ft. n. of Macpherson Ave. 111 ft. n.	111
Silver Ave.... S. W.....		" Morrow Ave. to Golden Ave .....	521
		Total .....	2,859
<b>MAINS ON PRIVATE AND OTHER PROPERTY:</b>			
<b>4-IN. SUB-MAINS:</b>			
Princes' St. Yard. ....		Along w. side of new asphalt plant ...	362
<b>6-IN. SUB.-MAINS:</b>			
S'nyaside Orphanage .....		From Queen St. 346 ft. n. ....	383½
" .....		" 6 in. main, s. of Home, 97½ ft. w. ....	97½
" .....		" 6 in. main, n. of Home, 104½ ft. w. ....	104½
		Total .....	947½

SCHEDULE No. 10—*Continued.*

## MAINS TAKEN UP OR ABANDONED DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.	Length in Feet.
6-IN. SUB-MAINS:			
Boustead Ave. ....	South ....	From west line of Roncesvalles easterly to 12-in. main .....	130
Dovercourt Rd....	West.....	Across Van Horne Ave.....	30
		Total .....	160
4-IN. SUB-MAINS:			
Jameson Ave. ....	West ....	Jog in Empress Crescent .....	78
8-IN. OLD CEMENT MAIN:			
John St. ....	West ....	From King to Queen Sts. (abandoned) ....	1,240

Mains throughout the City of all Sizes and Descriptions, including those on Streets, Government, Private or other Property, at the end of the year 1908.

Size.	Total length in feet in use at end of 1907.	Put in during 1908.	Taken out or abandoned during 1908.	Total length in feet in use at the end of the year 1908.
36 inch mains.....	19,725 $\frac{1}{4}$	.....	.....	19,725 $\frac{1}{4}$
30-inch "	11,242	.....	.....	11,242
24-inch "	34,009	.....	.....	34,009
20 inch "	5,076	23,972	.....	29,048
16-inch "	5,691	5,158 $\frac{3}{4}$	.....	10,849 $\frac{3}{4}$
12 inch "	296,962 $\frac{3}{4}$	10,737 $\frac{1}{2}$	.....	307,700 $\frac{1}{4}$
10-inch "	14,195	.....	.....	14,195
8 inch "	9,049 $\frac{1}{2}$	1,069	.....	10,118 $\frac{1}{4}$
6-inch "	1,144,725	53,492 $\frac{3}{4}$	160	1,198,057 $\frac{3}{4}$
4-inch "	49,631 $\frac{1}{2}$	2,859	78	52,412 $\frac{1}{4}$
3-inch "	9,980 $\frac{1}{2}$	.....	.....	9,980 $\frac{1}{2}$
2 inch and 4-inch service mains..	5,943 $\frac{1}{2}$	.....	.....	5,943 $\frac{1}{2}$
Old 8 inch cast iron mains.....	6,085	.....	.....	6,085
Old 8 inch cement mains .....	1,240	.....	1,240	.....
	1,613,556	97,289	1,478	1,709,367

Total length in use at end of year 1,709,367 feet, or 323.743 miles.

## SCHEDULE No. 11.

## STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1908.

Street, Avenue, Etc.	Side of Street.	Location.
Ada St .....	West .....	156 feet south of Wallace Ave., 3-way.
" .....	" .....	462 $\frac{1}{2}$ " " " "
Albert St .....	South .....	140 feet east of Terauley St., "
Awde St .....	North .....	285 $\frac{1}{2}$ " Brock St., 3-way.
Baker St.....	West .....	286 $\frac{1}{4}$ feet north of Clinton Ave., "
" .....	North .....	341 $\frac{1}{2}$ feet west of jog in Baker St., 3-way.
" .....	" .....	105 $\frac{1}{4}$ feet east of Baldwin's Rd., "
Balmoral Ave.....	" .....	304 $\frac{1}{2}$ feet west of Yonge St.
" .....	" .....	655 $\frac{1}{4}$ " " "
" .....	" .....	996 $\frac{1}{2}$ " " " 3-way.
Bathurst St .....	East .....	160 feet south of Nassau St., "
Berryman St.....	North .....	244 feet east of Hazelton Ave., "
Beatrice St.....	West .....	300 feet south of Bloor St.
" .....	" .....	34 " College St., 3-way.
" .....	" .....	21 feet north of "
" .....	" .....	622 $\frac{1}{2}$ " "
Beverley St.....	East .....	183 $\frac{1}{4}$ " Queen St., "
" .....	" .....	202 " Stephanie Place.
Boswell Ave.....	North .....	200 $\frac{1}{2}$ feet west of Avenue Rd.
Boultbee Ave .....	South .....	310 $\frac{1}{2}$ feet east of Jones Ave.
" .....	" .....	622 $\frac{1}{2}$ " "
Broadview Ave....	East .....	8 $\frac{1}{2}$ feet north of Withrow Ave.
" .....	" .....	4 " Bain Ave.
Castle Frank Cres.....	" .....	281 feet south east of Castle Frank Ave., 3 way
" .....	" .....	744 " " "
Carr St.....	North .....	184 feet west of Denison Ave., 3-way.
Clarence Ave.....	" .....	277 feet east of Yonge St. 3-way.
" .....	" .....	580 $\frac{1}{2}$ " "
" .....	" .....	883 $\frac{1}{2}$ " "
Clinton Ave.....	" .....	463 $\frac{1}{2}$ " Oriole Rd., 3-way.
" .....	" .....	777 $\frac{1}{4}$ feet west of "
" .....	" .....	21 $\frac{1}{2}$ feet east of Baker St., "
College St.....	" .....	141 " Roncesvalles Ave., 3-way.
" .....	" .....	37 feet west of Margueretta St., "
Carlaw Ave.....	East .....	277 $\frac{1}{4}$ feet south of Dickens Ave.
" .....	" .....	Opposite Dickens Ave.
" .....	" .....	300 $\frac{1}{2}$ feet north of Dickens Ave., 3 way.
" .....	" .....	106 $\frac{1}{2}$ feet south of Gerrard St., "
DeLisle Ave.....	North .....	10 $\frac{1}{2}$ feet west of Yonge St.
" .....	" .....	333 $\frac{1}{2}$ " " 3-way.
" .....	" .....	605 $\frac{1}{2}$ " " "
Don Esplanade W.....	West .....	207 $\frac{1}{2}$ feet east of Marlboro' Cres., 3-way.
Dundas St.....	East .....	250 $\frac{1}{2}$ feet south of King St., 3-way.
Elm Grove Ave... ..	" .....	North-east corner Chelsea St. "
" .....	" .....	229 $\frac{1}{2}$ feet north of King St., "
Emerson Ave. ....	West .....	315 feet south of Queen St., "
Empress Cres.....	South .....	255 feet north of Lappin Ave.
" .....	" .....	268 $\frac{1}{2}$ feet east of Dowling Ave.
" .....	" .....	53 feet west of Jamieson Ave.
" .....	" .....	181 feet east of "
" .....	" .....	641 feet west of Dowling Ave.

SCHEDULE No. 11—*Continued.*

## STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.
Endean Ave . . . . .	North . . . . .	302½ feet east of Jones Ave.
Exhibition Grounds:		
Manuf'rs' Bldgs.	East . . . . .	Opp. porch of Mfgrs. Bldg., 3 way.
" " "	South . . . . .	" " " "
" " "	West . . . . .	" " " "
Fern Ave. . . . .	North . . . . .	217 feet west of Roncesvalles Ave.
" " . . . . .	" . . . . .	533 " " " "
Fainham Ave . . . . .	" . . . . .	306 " Yonge St., 3-way.
" " . . . . .	" . . . . .	658½ " " "
" " . . . . .	" . . . . .	1,008 " " "
Fenwick Ave . . . . .	East . . . . .	1,91½ feet south of Danforth, "
" " . . . . .	" . . . . .	760½ " " "
Foxbar Rd. . . . .	South . . . . .	350 feet south-east of St. Clair Ave.
" " . . . . .	East . . . . .	668 " " "
" " . . . . .	West . . . . .	363 feet east of Avenue Rd.
Fraser Ave. . . . .	" . . . . .	501½ feet south of Liberty St., 3-way.
Frizzell Ave. . . . .	North . . . . .	758 " " "
Galley Ave. . . . .	South . . . . .	304 feet east of Pape Ave., 3-way.
" " . . . . .	" . . . . .	255½ " Sorauen Ave., 3-way.
Garden Ave. . . . .	North . . . . .	7½ " Sunnyside Ave., "
Geoffrey St. . . . .	" . . . . .	261½ feet west of Roncesvalles Ave.
" " . . . . .	" . . . . .	247 " " " 3-way.
George St. . . . .	West . . . . .	517 " " "
Grace St. . . . .	" . . . . .	212 feet south of Gerrard St.
" " . . . . .	" . . . . .	15 feet south of Bloor St., 3-way.
Greenwoods Ave . . .	" . . . . .	318½ " " "
" " . . . . .	" . . . . .	346 feet north of Gerrard St.
Gwynne Ave. . . . .	East . . . . .	646 " " "
" " . . . . .	" . . . . .	257½ feet south of Queen St., 3-way.
Hampton Ave. . . . .	West . . . . .	265 " Melbourne Ave., 3-way.
Harbord St. . . . .	South . . . . .	44 feet north of Wolfrey Ave., "
Harriett St. . . . .	" . . . . .	157½ feet east of Manning Ave., "
Hastings Ave. . . . .	East . . . . .	125 " Hastings Ave., 3 way.
Indian Grove . . . . .	" . . . . .	442 feet south of Harriett St.
" " . . . . .	" . . . . .	195 " Ridout Ave., "
Irene St. . . . .	North . . . . .	280 feet north of "
Isabella St. . . . .	South . . . . .	200½ feet east of Carling Ave.
Jackes Ave. . . . .	North . . . . .	181½ " Yonge St.
" " . . . . .	" . . . . .	303 " " "
Jameson Ave. . . . .	East . . . . .	646 " " " 3-way.
" " . . . . .	" . . . . .	234½ feet south of King St., "
John St. . . . .	" . . . . .	260 feet north of Springhurst Ave., 3-way.
" " . . . . .	West . . . . .	110 " Nelson St., 3-way.
Kensington Pl. . . . .	" . . . . .	Opposite Pearl St., 3-way.
Leonard Ave. . . . .	" . . . . .	South end of Kensington Pl.
Logan Ave. . . . .	" . . . . .	49½ feet south of Nassau St., 3-way.
Lovatt Pl. . . . .	North . . . . .	284½ " Danforth Ave.
Lowther Ave. . . . .	" . . . . .	256½ feet east of Sumach St., 3-way.
Lansdowne Ave. . . . .	East . . . . .	316 feet west of Avenue Rd.
		365½ feet north Queen St.

SCHEDULE No. 11—*Continued.*

## STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.
Lansdowne Ave....	East .....	12½ feet south of Marion St., 3-way.
" " "	" .....	556½ feet north "
" " "	" .....	855½ " "
" " "	" .....	1,213½ " "
Major St.....	West .....	18 " College St.
Marion St. West..	North .....	202½ feet west of Roncesvalles Ave., 3-way.
" " "	" .....	504½ " " "
Marlboro' Cres....	East .....	100 feet south of Heath St.
" " "	" .....	16 " DeLisle Ave.
" " "	" .....	16 feet north of St. Clair Ave.
Marmaduke St....	North .....	14 feet west of Roncesvalles Ave., 3-way.
" " "	" .....	304 " " "
" " "	" .....	9 feet east of Sunnyside Ave., "
Melbourne Ave....	South .....	167 " Cowan Ave.
" " "	" .....	166 " Elm Grove Ave.
" " "	" .....	160½ " Gwynne Ave., " "
Mutnal St.....	West .....	300 feet south of Gerrard St.
Neepawa Ave....	South .....	7 feet west of Lynd Ave.
Parkway Ave....	North .....	610 feet south west of Dundas St.
Pearl St.....	" .....	129½ feet west of Simcoe St., "
Pearson Ave.....	South .....	167 feet east of John St., "
Pleasant Ave....	North .....	314 feet west of Roncesvalles Ave., "
" " "	" .....	303½ feet east of Yonge St., "
Poplar Plains Rd..	East .....	627½ " "
Queen Victoria Av.	South .....	Near the creek
" " "	" .....	158½ feet east of Leslie St., "
Ritchie Ave.....	North .....	462½ " "
Richmond St. W..	" .....	At e. end of street near railway fence.
Rosehill Ave .....	" .....	157½ feet west of Bay St., "
" " "	" .....	315 feet east of Yonge St., "
" " "	" .....	594½ " "
" " "	" .....	901½ " "
" " "	" .....	1,316 " "
Rowanwood Ave... .	" .....	247½ feet west of Scarth Rd., "
" " "	" .....	539 " "
" " "	" .....	700 feet east of Yonge St., "
Rusholme Rd....	East .....	110 feet south of College St.
Ruskin Ave.....	North .....	343 feet west of Perth Ave.
" " "	" .....	153½ " Franklyn Ave.
St. Clarens Ave... .	West .....	95 feet south of College St.
St. Clair Ave. ...	North .....	304½ feet east of Yonge St., 3-way.
" " "	" .....	644½ " " "
" " "	" .....	996½ " " "
Scarth Rd.....	East .....	110½ feet north of Chestnut Pk. Rd. "
" " "	" .....	415 " "
" " "	" .....	715 " "
Spencer Ave.....	" .....	121 " Springhurst Ave. "
" " "	" .....	441½ " "
" " "	" .....	388½ feet south of King St., "
Shaw St.....	West .....	1,322 feet north of Bloor St., "
Stonehouse Cres..	South .....	161 feet west of Gladstone Ave., "

## SCHEDULE No. 11—Continued.

## STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.
Springhurst Ave..	North .....	160 feet west of Close Ave., 3-way.
Sunnyside Ave..	East .....	270 feet south of Marion St. West, "
Silver Ave.....	West .....	125 " Golden Ave.
Sussex Ave.....	South .....	5 feet west of Spadina Ave.
" " .....	North .....	18 " Major St.
" " .....	" .....	12 feet east of Borden St.
Tennis Cres.....	" .....	267½ feet east of Broadview Ave., 3-way.
Thorold Ave.....	" .....	376½ feet west of Alhambra Ave., "
Trinity Sq.....	North .....	Opposite Trinity Church,
" .....	East .....	S. E. cor. of Trinity Sq.,
Tyndall Ave.....	" .....	147 feet south of King St.,
" " .....	" .....	391 " "
" " .....	West .....	859 " "
Wallace Ave.....	North .....	589½ feet west of Perth Ave.,
Walter St.....	" .....	247 " Roncesvalles Ave., "
" .....	" .....	559 " "
Whitney Ave.....	South .....	South-east corner Whitney and Glen Rd., 3-way.
" " .....	" .....	300 feet east of Glen Rd., 3-way.
" " .....	" .....	600 feet east of Glen Rd.
Wineva Ave.....	West .....	203 feet north of Queen St., 3 way.
Wolfrey Ave. ....	North .....	86½ feet east of Hampton Avenue, 3 way.
Wright Ave.....	" .....	13½ feet west of Roncesvalles Avenue, 3-way.
" .....	" .....	317 feet west of Roncesvalles Avenue, 3 way.
Yonge St.....	East .....	8 feet south of Jacks Avenue, 3 way.
" " .....	" .....	Opposite Balmoral Avenue.
" " .....	" .....	28½ feet north of Rosehill Avenue.
" " .....	" .....	17 feet north of Pleasant Avenue, 3-way.
" " .....	" .....	8 feet south of St. Clair Avenue, 3 way.
" " .....	" .....	291 feet north of St. Clair Avenue, 3-way.
" " .....	" .....	15½ feet south of Clarence Avenue, 3 way.
 HYDRANTS PLACED ON PRIVATE PROPERTY.		
Dominion Radiator Co.'s Works .....	North .....	5 4-way hydrants on north side of building.
" " .....	West .....	1 4 way hydrant on west side of building.
Princess St. Yard .....	.....	Near New Asphalt Plant.
S'nyside Orph'l'ge .....	.....	South of building, 3-way.
" " .....	.....	North of building, 3-way.
 2-WAY HYDRANTS REMOVED FROM OFF THE STREETS.		
Elm Grove Ave....	West .....	209 feet south of Queen Street.
" " .....	" .....	230 feet north of King Street.
Gwynne Ave.....	" .....	273 feet south of Queen Street.
" " .....	" .....	282 feet north of King Street.
Jameson Ave. ....	" .....	610 feet south of King Street.
John St.....	" .....	170 feet north of King Street.
Lansdowne Ave. ....	" .....	South-west corner of Marion Street.
" " .....	" .....	650 feet north of Marion Street.
" " .....	" .....	350 feet south of Rideau Avenue.

SCHEDULE No. 11—*Continued.*

## STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.
Lowther Ave.....	West .....	300 feet west of Avenue Road.
3-WAY HYDRANTS RE	PLACING 2-WA	Y HYDRANTS ALREADY IN POSITION.
Anne St. ....	North .....	359 feet east of Yonge Street.
Bloor St. ....	South .....	258 feet east of Yonge Street.
" "	" .....	56 $\frac{1}{2}$ feet west of Park Road.
" "	" .....	280 feet west of Sherbourne Street.
Bleeker St. ....	West .....	217 feet south of Wellesley Street.
Britain St. ....	South .....	South-west corner of Sherbourne Street.
Carlton St. ....	North .....	172 $\frac{1}{4}$ feet east of Parliament Street.
" "	" .....	259 $\frac{1}{4}$ feet east of Ontario Street.
" "	South .....	300 feet east of Jarvis Street.
" "	" .....	307 $\frac{1}{2}$ feet west of Church Street.
" "	" .....	321 feet east of Yonge Street.
" "	" .....	South-west corner of Mutual Street.
Charles St. ....	" .....	326 feet east of Yonge Street.
Church St. ....	West .....	South-west corner of Bloor Street.
" "	" .....	South-west corner of Charles Street.
" "	" .....	North-west corner of Gloucester Street.
" "	" .....	North-west corner of Isabella Street.
Euclid Ave. ....	West .....	167 feet north of Gould Street.
Elizabeth St. ....	" .....	181 feet north of Harbord Street.
Front St. ....	North .....	South-west corner of Albert Street.
Gerrard St. ....	South .....	North-east corner of Bay Street.
" "	" .....	South-east corner of Jarvis Street.
Geoffrey St. ....	" .....	South-east corner of Berkley Street.
Grandview Ave. ....	North .....	276 feet east of Roncesvalles Avenue.
Langley Ave. ....	" .....	302 $\frac{1}{2}$ feet west of Logan Avenue.
Madison Ave. ....	East .....	557 $\frac{1}{2}$ feet east of Broadview Avenue.
Margueretta St. ....	West .....	35 feet north of Lowther Avenue.
" "	" .....	493 $\frac{1}{2}$ feet north of College Street.
Queen St. East....	North .....	802 feet north of College Street.
" "	" .....	6 feet west of Lee Avenue.
" "	" .....	North-west corner of Leuty Avenue.
Queen's Park Cr. ....	East .....	81 feet west of Belfair.
Richmond St. ....	South .....	North-east corner of College Street.
Sackville St. ....	East .....	300 feet east of Church Street.
St. Joseph St. ....	South .....	North-east corner of Eastern Avenue.
" "	" .....	South-west corner of Yonge Street.
Waverley Ave. ....	East .....	South-east corner of St. Vincent Street.
Wickson Ave. ....	South .....	302 feet south of Queen Street.
" "	" .....	South-west corner of Yonge Street.
Wood St. ....	" .....	300 feet west of Yonge Street.
		South-west corner of Mutual Street.

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SCHEDEULE No. 11—*Continued.*

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## SUMMARY OF HYDRANTS—1908.

Number of hydrants of all kinds on streets at end of 1907 .....	3,441
Number of hydrants of all kinds on private property at end of 1907 .....	103
	<hr/>
There were removed from off the streets, 10 2-way hydrants; and 41 2-way hydrants were replaced with 3-way hydrants.....	3,544
	<hr/>
Number of additional hydrants set on streets during 1908 .....	51
Number of additional hydrants set on private property during 1908.....	<hr/> 9
	<hr/>
3-way hydrants replacing 2-way hydrants already on streets .....	3,684
	<hr/>
Total.....	41
	<hr/>
	3,725

## SCHEDULE No. 12.

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1908, SHOWING THE SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
<b>24-INCH STOP VALVES:</b>		
High Level Pumping Station ....	West .....	On 24-inch discharge main.
<b>20 INCH STOP VALVES:</b>		
Alma Ave. (ext'n.)	South .....	At west end at G. T. R. fence line.
Argyle St.....	" .....	" east line of Dundas St.
" "	" .....	" west " "
" "	" .....	Dovercourt Rd.
" "	" .....	Gladstone Ave.
Arthur St.....	North .....	Bathurst St. P. V.
" "	" .....	Euclid Ave.
" "	" .....	Grace St.
" "	" .....	Shaw St
Dupont St.....	South .....	Kendal Ave.
" "	North .....	" " "
" "	" .....	east " Bathurst St.
" "	" .....	west " "
" "	" .....	" " Manning Ave.
" "	" .....	east " "
Earnbridge Ave..	South .....	Shaw St.
High Level Pumping Station ....	North .....	" end near railway fence.
Maple Grove Ave..	West .....	On 20 inch discharge main.
Marion St.....	South .....	At east line of O'Hara Ave.
" "	" .....	" Lansdowne Ave.
Pearson Ave.....	" .....	" west " "
" "	" .....	Sorauren Ave.
" "	" .....	Macdonell Ave.
" "	" .....	Roncesvalles Ave.
Shaw St.....	West .....	south " Arthur St.
Van Horne Ave....	South .....	west " Ossington Ave.
" "	" .....	east " Dovercourt Rd.
" "	" .....	west " "
" "	" .....	east " Bartlett Ave.
" "	" .....	" " Dufferin St.
<b>16-INCH STOP VALVES:</b>		
Dufferin St.....	West .....	At Dominion Radiator Co.'s Works opp. Van Horne Ave.
Royce Ave.....	South .....	" east end of Street at Dominion Radiator Co.'s fence.
" "	" .....	" east line of Lansdowne Ave.
" "	" .....	" west " " "
" "	" .....	" east of Northern Railway Track.
" "	" .....	" west " " "
" "	" .....	" east line of Symington Ave.
" "	" .....	" west " " "
" "	" .....	" " City limits.

SCHEDULE No. 12—*Continued.*

TOTAL LIST OF ALL VALVES PLACED IN POSITION, DURING THE YEAR 1908, SHOWING THE SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
<b>12 INCH STOP VALVES:</b>		
Bathurst St. ....	East .....	At north line of Dupont St.
" " ....	" .....	Between 20-inch and 12 inch mains.
Carlaw Ave. ....	" .....	At south line of Dickens Ave.
" " ....	" .....	" " " Gerrard St.
Dovercourt Rd. ....	West .....	North of 20 inch main (Van Horne Ave.)
Dominion Radiator Company's Works	....	On 16 inch main fire supply.
Dufferin St. ....	East .....	At north line of Van Horne Ave.
" " ....	" .....	Between 20 in. and 12-in. mains (Van Horne)
" " ....	" .....	At south line of Alma Ave.
" " ....	" .....	North of 20-inch main (Alma Ave.)
Dundas St. ....	West .....	At south line of Argyle St.
" " ....	" .....	North of 20 inch main (Argyle St.)
" " ....	East .....	South side of lane opp. s. line of Boustead Ave.
Lansdowne Ave. ....	West .....	At north line of Royce Ave.
" " ....	" .....	North of 16-inch main (Royce Ave.)
" " ....	East .....	At north line of Queen St.
" " ....	" .....	" south " Marion St.
" " ....	" .....	" north " "
Manning Ave. ....	North .....	South of 8 inch connection to Rubber Works.
Ossington Ave. ....	West .....	Between 20-inch and 12-inch mains (Dupont St.)
Osler Ave. ....	" .....	North of 20-inch main (Van Horne).
" " ....	" .....	" 16 inch main (Royce Ave.)
Queen St. South. ....	South .....	Between 12-inch main Roncesvalles Ave. and 8-inch main King St.
Roncesvalles Ave. ....	West .....	At north line of Queen St.
" " ....	" .....	" south " Pearson Ave.
" " ....	" .....	North of 20-inch main (Pearson).
" " ....	" .....	At north line of Pearson Ave.
" " ....	" .....	" south " Fern Ave.
" " ....	" .....	" north " "
" " ....	" .....	" south " High Park Boulevard.
" " ....	" .....	" north " "
" " ....	" .....	" south " Constance Ave.
" " ....	" .....	" " " Howard Park Ave.,
" " ....	" .....	" north " "
" " ....	" .....	" south " Boustead Ave.
Royce Ave. ....	North .....	West line of Northern R'y fence.
Yonge St. ....	East .....	At north line of St. Clair Ave.
<b>8 INCH STOP VALVES:</b>		
Exhibit'n Grounds	.....	At east side of Manufacturers' Building.
" " ....	" .....	" west " "
Macdonell Ave. ....	West .....	" south line of Pearson Ave.
" " ....	" .....	North of 20 inch main.
<b>6 INCH STOP VALVES:</b>		
Ada St. ....	West .....	At south line of Wallace Ave.
Adelaide St. ....	South .....	" west " Maude St.
Arthur St. ....	" .....	" east " Shaw St.

SCHEDULE No. 12—*Continued.*

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1908, SHOWING THE SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
Arthur St.....	South .....	Between 20-inch and 6 inch mains.
Awde St.....	North .....	At east line of Brock Ave.
Baker St.....	West .....	" north " Lonsdale Ave.
Balmoral Ave.....	North .....	" west " Yonge St.
Bartlett Ave.....	West .....	North of 20-inch main (Van Horne).
Bathurst St.....	East .....	At south line of Harbord St.
Beaconsfield Ave.....	West .....	North line of Argyle St.
" " .....	" .....	At south line of Argyle St.
Beatrice St.....	" .....	" south line of Bloor St.
Bellwoods Ave....	East .....	South of 20 inch main (Arthur St.)
Berryman St.....	North .....	At east line of Hazleton Ave.
" " .....	" .....	" west " Davenport Rd.
Borden St.....	West .....	" south " Harbord St.
Boswell Ave.....	North .....	" west " Avenue Rd.
" " .....	" .....	643 ft. w. of Avenue Rd. (conn. to 4-inch).
Brock Ave.....	West .....	North side of Cunningham Ave.
" " .....	" .....	At south line of Earnbridge Ave.
" " .....	" .....	" " " Maple Grove Ave.
" " .....	" .....	North of 20 inch main.
Boulbee Ave....	South .....	At east line of Jones Ave.
Brunswick Ave....	East .....	" south " Harbord St.
Burnfield Ave....	North .....	" west " Shaw St.
Campbell Ave....	West .....	North of 16-inch main.
Christie St.....	" .....	At south line of Dupont St.
" " .....	" .....	North of 20-inch main.
Claremont St....	" .....	South of 20-inch main (Arthur St.)
Clarence Ave....	North .....	At east line of Yonge St.
Clinton St.....	East .....	" south " Harbord St.
College St.....	North .....	" east " Roncesvalles Ave.
Constance Ave....	" .....	" west " "
Dawson Ave....	" .....	Leslie St.
" " .....	" .....	Dunedin St.
DeLisle Ave....	" .....	" west " Yonge St.
" " .....	" .....	" east " Marlboro' Cres.
Don Esplanade, w.	West .....	" south " King St
Doovercourt Rd....	" .....	" north " Argyle St.
Dupont St.....	North .....	" east " Christie St.
Eastern Ave.....	" .....	" " " Knox St.
Edwin Ave.....	West .....	" north " Ruskin Ave.
Elm Grove Ave... .	East .....	" south " Queen St.
" " .....	" .....	" north " King St.
Emerson Ave....	West .....	" " " Lappin Ave.
" " .....	" .....	" south " Royce Ave.
" " .....	" .....	North of 16-inch main (Royce).
" " .....	" .....	At north line of Royce Ave.
Empress Cres....	South .....	" east " Dowling Ave.
" " .....	" .....	" " " Jameson Ave.
" " .....	" .....	" west " "
" " .....	North .....	Opp. west line of Starr Ave.
Endean Ave.....	" .....	At east line of Jones Ave.

SCHEDULE No. 12—*Continued.*

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1908, SHOWING THE SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
Endean Ave . . . . .	North . . . . .	At west line of Leslie St.
Euclid Ave . . . . .	West . . . . .	" south " Harbord St.
" " " . . . . .	" . . . . .	South of 20-inch main (Arthur St.)
Farnham Ave . . . . .	North . . . . .	At west line of Yonge St.
Fern Ave . . . . .	" . . . . .	" " " Roncesvalles Ave.
" " " . . . . .	" . . . . .	East of 12-inch main.
Foxbar Rd . . . . .	Centre . . . . .	At east line of Avenue Rd.
" " " . . . . .	East . . . . .	" south " St. Clair Ave.
Franklyn Ave . . . . .	West . . . . .	" north " Ruskin Ave.
Frizzell Ave . . . . .	North . . . . .	" east " Pape Ave.
Galley Ave . . . . .	South . . . . .	" " " Sorauren Ave.
" " " . . . . .	" . . . . .	Between 12-inch and 6-inch main.
Garden Ave . . . . .	North . . . . .	At west line of Roncesvalles Ave.
Garnet Ave . . . . .	" . . . . .	" east " Shaw St.
Geoffrey St . . . . .	" . . . . .	" west " Roncesvalles Ave.
" " " . . . . .	" . . . . .	East of 12-inch main.
Gladstone Ave . . . . .	West . . . . .	South line of Alma Ave.
" " " . . . . .	" . . . . .	North of 20-inch main (Alma Ave.)
Grace St . . . . .	" . . . . .	At south line of Bloor St.
Gwynne Ave . . . . .	East . . . . .	" " " Queen St.
" " " . . . . .	" . . . . .	" north " King St.
Harbord St . . . . .	South . . . . .	" east " Clinton St.
" " " . . . . .	" . . . . .	" " " Palmerston Blvd.
" " " . . . . .	" . . . . .	Between 6 in. mains on Palmerston Blvd.
" " " . . . . .	" . . . . .	At west line of Palmerston Blvd.
" " " . . . . .	" . . . . .	" east " Spadina Ave.
" " " . . . . .	" . . . . .	" west " "
Havelock St . . . . .	West . . . . .	" north line of Dewson St.
Hewitt Ave . . . . .	North . . . . .	East of 12-inch main.
High Park Blvd . . . . .	" . . . . .	At west line of Roncesvalles Ave.
" " " . . . . .	" . . . . .	East of 12-inch main.
Howard Park Ave . . . . .	South . . . . .	At east line of Roncesvalles Ave.
" " " . . . . .	" . . . . .	" west " "
Huron St . . . . .	East . . . . .	" south line of Harbord St.
Indian Grove . . . . .	" . . . . .	" north " Ridout Ave.
" " " . . . . .	" . . . . .	" south " "
Jackes Ave . . . . .	North . . . . .	" east " Yonge St.
Jameson Ave . . . . .	East . . . . .	" south " King St.
" " " . . . . .	" . . . . .	" north " Springhurst Ave.
" " " . . . . .	West . . . . .	" south " Empress Cres., w.
Jones Ave . . . . .	" . . . . .	" north " Baird Ave.
Lansdowne Ave . . . . .	" . . . . .	158 ft. north of Whytock Ave.
" " " . . . . .	" . . . . .	At south line of Marion St.
" " " . . . . .	" . . . . .	" " " Royce Ave.
Lappin Ave . . . . .	North . . . . .	" east " Emerson Ave.
Lippincott St . . . . .	West . . . . .	" south line of Harbord St.
Lovatt Pl . . . . .	North . . . . .	" east " Sumach St.
Lowther Ave . . . . .	" . . . . .	" west " Avenue Rd.
" " " . . . . .	" . . . . .	622 ft. w. of Avenue Rd. (conn. to 4 in.)
Major St . . . . .	West . . . . .	At south line of Harbord St.
Manning Ave , . . . . .	East . . . . .	" north " Dupont St.

SCHEDULE No. 12.—*Continued.*

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1908, SHOWING THE SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
Manning Ave....	West .....	At south line of Harbord St.
" "	" .....	South of 20 inch main (Arthur St.)
Maple Ave.....	" .....	At north line of Dale Ave.
Marion St.....	North .....	Between 20 in. and 8 in. mains (Macdonell).
" "	" .....	At west line of Roncesvalles Ave.
" "	" .....	East of 12-inch main (Roncesvalles Ave.)
" "	" .....	At east line of Sunnyside Ave.
Markham St.....	West .....	" south " Harbord St.
" "	" .....	South of 20 inch main (Arthur St.)
Marlboro' Cres....	East .....	At north line of St. Clair Ave.
Marmaduke Ave ..	North .....	" west " Roncesvalles Ave.
" "	" .....	" east " Sunnyside Ave.
Melbourne Ave....	South .....	" west line of Dufferin St.
" "	" .....	" east " Cowan Ave.
Neepawa Ave....	" .....	" " Roncesvalles Ave.
O'Hara Ave .....	West .....	" south " Marion St.
O'Hara Ave .....	" .....	North of 20 inch main.
Palmerston Ave...	" .....	South of 20 inch main (Arthur St.)
" "	" .....	North of Seaton Sq.
" "	" .....	South " "
Palmerston Blvd..	" .....	At south line of Harbord St.
" "	East .....	" " " " "
Pape Ave.....	West .....	At north line of Dagmar Ave.
" "	" .....	225 ft. south of Dresden Ave.
Pearl St.....	North .....	At west line of Simcoe St.
" "	South .....	" east " John St.
" "	" .....	" west " Duncan St.
Pearson Ave.....	North .....	" west line of Roncesvalles Ave.
Perth Ave .....	West .....	North of 16-inch main.
Pleasant Ave... .	North .....	At east line of Yonge St.
Powell Ave.....	West .....	" north " Dale Ave.
Queen Victoria Ave	South .....	" east " Leslie St.
Ridout Ave. ....	North .....	" west " Indian Rd
Robert St .....	East .....	" south " Harbord St.
Roncesvalles Ave..	" .....	" " Pearson Ave.
Rosehill Ave.....	North .....	" east " Yonge St.
Rowanwood Ave ..	" .....	" west " Scarth Rd.
Rusholme Rd. ....	East .....	" south " College St.
Scarth Rd .....	" .....	" north " Chestnut Park Rd.
Shanley Ave.....	North .....	" east " Bartlett Ave.
Shaw St.....	West .....	" north " Burnfield Ave.
" "	" .....	South of 20-inch main.
" "	" .....	At north line of Hallam.
" "	" .....	960 ft. north of College St.
" "	" .....	East of 20-inch main (Argyle).
" "	" .....	West " " "
Shaw Pl.....	North .....	At east line of Ossington Ave.
Soranren Ave. ....	West .....	" south " Pearson Ave.
" "	" .....	North of 20 inch main (Pearson)

SCHEDULE No. 12—*Continued.*

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1908, SHOWING THE SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
Spadina Ave.....	West .....	At north line of Harbord St.
" " .....	" south .....	" " "
Spencer Ave.....	East .....	" " " King St.
" " .....	" north .....	Springhurst Ave.
Springhurst Ave ..	North .....	" east ....." Jameson Ave.
Stonehouse Cres ..	South .....	" west ....." Gladstone Ave.
St. Clair Ave.....	North .....	" east ....." Yonge St.
St. Clarens Ave..	West .....	1164 ft. north of College St.
" " .....	" .....	At south line of Royce Ave.
" " .....	" north .....	" " "
St. Helen's Ave.....	" .....	226 ft. south of Dublin St.
Tecumseh St .....	East .....	At north line of Defoe St.
Tennis Cres .....	North .....	" east ....." Broadview Ave.
Thorold Ave.....	" .....	" west ....." Alhambra Ave.
Tyndall Ave.....	East .....	" south ....." King St.
" " .....	" .....	On connection to 4-inch main.
Wallace Ave. ....	North .....	At west line of Lansdowne Ave.
Walter St .....	" .....	" " " Roncesvalles Ave.
Ward St .....	West .....	" south ....." Royce Ave.
Whitney Ave.....	South .....	" east ....." Glen Rd.
Wineva Ave.....	West .....	" north ....." Queen St.
Wolfrey Ave.....	North .....	" east ....." Hampton Ave.
Wright Ave .....	" .....	" west ....." Roncesvalles Ave.
Yonge St. ....	East .....	" south ....." Jackes Ave.
" " .....	" .....	" St. Clair Ave.
<b>4 INCH STOP VALVES:</b>		
Castle Frank Cres.	South .....	" west ....." Castle Frank Ave.
Cecil St .....	" .....	" east ....." Beverley St.
Harriett St. ....	" .....	" " ....." Leslie St.
Hastings Ave. ....	East .....	" south ....." Harriett St.
High Park.....	.....	North-west cor. of road to Deer pens.
Jameson Ave.....	West .....	At north line of Springhurst Ave.
Kensington Pl .....	South .....	" west ....." Kensington Ave.
Silver Ave.....	West .....	" north ....." Morrow Ave.
" " .....	" .....	" south ....." Golden Ave

SCHEDULE No. 12—*Continued.*

## VALVES TAKEN OUT OR ABANDONED DURING 1908.

Street, Avenue, Etc.	Side of Street.	Location.
12-INCH STOP VALVES : Lansdowne Ave. . . . .	West . . . . .	North line of Rideau Ave.
9-INCH STOP VALVES : John St . . . . .	West . . . . .	South line of Queen (abandoned).

## SUMMARY OF VALVES ON STREETS AT END OF 1908.

Size and Description.	In use at end of 1907.	Put in during 1908.	Taken out during 1908.	Total in use at end of 1908.
STOP VALVES :				
36 inch . . . . .	14	.....	.....	14
30 " . . . . .	7	.....	.....	7
24 " . . . . .	23	1	.....	24
20 " . . . . .	8	30	.....	38
16 " . . . . .	7	9	.....	16
12 " . . . . .	555	37	1	591
10 " . . . . .	6	.....	.....	6
9 " . . . . .	6	.....	1	5
8 " . . . . .	15	4	.....	19
6 " . . . . .	2,061	179	.....	2,240
4 " . . . . .	92	9	.....	101
3 " . . . . .	30	.....	.....	30
Totals . . . . .	2,824	269	2	3,091
CHECK VALVES :				
36 inch . . . . .	5	.....	.....	5
30 " . . . . .	4	.....	.....	4
24 " . . . . .	1	.....	.....	1
20 " . . . . .	1	.....	.....	1
12 " . . . . .	12	.....	.....	12
6 " . . . . .	50	.....	.....	50
Totals . . . . .	73	.....	.....	73

## SCHEDULE No. 13.

## STATEMENT OF HOUSE SERVICES IN USE TO 31ST DECEMBER, 1908.

Total number of services in use previous to 1874 .....	.....	1,375
" " laid during 1874.....	.....	552
Number of new " " 1875.....	.....	842
" renewed services laid during 1875.....	.....	24
" new " " 1876 by permit.....	.....	141
" renewed " " 1876.....	.....	12
" new " laid by Commission 1876.....	.....	602
" renewed " " " 1876 .....	.....	258
" new " " " 1877.....	.....	1,006
" renewed " " " 1877.....	.....	161
" new " " Corporation 1878.....	.....	2,189
" renewed " " " 1878 .....	.....	103
" new " " " 1879.....	.....	1,861
" renewed " " " 1879 .....	.....	97
" new " " " 1880 .....	.....	1,014
" renewed " " " 1880 .....	.....	41
" new " " " 1881.....	.....	2,654
" renewed " " " 1881.....	.....	117
" new " " " 1882.....	.....	1,826
" renewed " " " 1882.....	.....	44
" new " " " 1883.....	.....	1,766
" renewed " " " 1883.....	.....	54
" new " " " 1884.....	.....	2,087
" renewed " " " 1884.....	.....	12
" new " " " 1885.....	.....	2,344
" renewed " " " 1885.....	.....	22
" new " " " 1886.....	.....	2,936
" renewed " " " 1886.....	.....	19
" new " " " 1887 .....	.....	3,250
" renewed " " " 1887.....	.....	65
" new " " " 1888.....	.....	2,990
" renewed " " " 1888.....	.....	65
" new " " " 1889 .....	.....	3,288
" renewed " " " 1889.....	.....	68
" new " " " 1890 .....	.....	2,136
" renewed " " " 1890.....	.....	55
" new " " " 1891 .....	.....	2,058
" renewed " " " 1891.....	.....	53
" new " " " 1892 .....	.....	1,151
" renewed " " " 1892.....	.....	49
" new " " " 1893 .....	.....	526
" renewed " " " 1893 .....	.....	2
" new " " " 1894 .....	.....	390

SCHEDULE No. 13—*Continued.*

Number of renewed services laid by Corporation	1894.....	11
" new	" "	319
" renewed	" "	38
" new	" "	291
" renewed	" "	45
" new	" "	474
" renewed	" "	29
" new	" "	504
" renewed	" "	32
" new	" "	664
" renewed	" "	35
" new	" "	683
" renewed	" "	26
" new	" "	1,133
" renewed	" "	8
" new	" "	1,319
" renewed	" "	13
" new	" "	1,402
" renewed	" "	45
" new	" "	2,036
" renewed	" "	48
" new	" "	3,185
" renewed	" "	20
" new	" "	4,041
" renewed	" "	31
" new	" "	3,961
" renewed	" "	8
" new	" "	3,672
" renewed	" "	3
" services in Yorkville at time of annexation..	.....	448
" " Parkdale	" "	885
Total number of services laid on Island .....	.....	379

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**SCHEDULE NO. 14—NUMBER AND SIZE OF SERVICES IN USE TO DECEMBER 31ST, 1908.**

## SCHEDULE No. 15.

## METERS REBUILT IN SHOP.

Meter.	½-inch.	¾ inch.	1-inch.	1½-inch.	2-inch.	3-inch.	4-inch.	5-inch.	6-inch.	8-inch.	
Crown.....	68	30	12	5	1						116
Nash.....	16	1	4								21
Trident .....	27	13	6								46
Hersey.....	11	4	2								17
Lambert .....	1		1								2
Keystone.....	8	8	5	1	1						23
Gem .....					13	1					14
S. & A.....	8	4	4	2	1	1					20
Worth.....	7	7	19	2	13						48
Kennedy .....					4	3		9			16
Crest .....						2					2
Union .....				3							3
Empire .....	3	1			1						5
King .....	1				*						1
Total.....	150	68	53	3	37	7	7		9		334

## SCHEDULE No. 16.

METERS IN USE UP TILL DEC. 31ST, 1908.

Meter.	8-inch.	3/4-inch.	1-inch.	1 1/2 inch.	2-inch.	3-inch.	4-inch.	5-inch.	6-inch.	8-inch.	10-inch.	
Crown.....	558	255	124	....	113	71	66	....	11	....	....	1,198
Nash.....	43	29	38	....	2	....	....	....	....	....	....	112
Trident.....	86	74	55	....	....	....	....	....	....	....	....	215
Hersey.....	56	25	23	....	1	....	....	....	....	....	....	105
Lambert.....	20	14	12	....	....	....	....	....	....	....	....	46
Keystone.....	55	49	31	....	1	....	1 (E urek a)	....	....	....	....	137
Gem.....	....	....	....	....	83	15	11	....	4	....	1	114
Worth.....	47	69	143	35	146	35	3	....	....	....	....	478
Crest.....	....	....	....	....	....	13	10	....	....	....	....	23
Empire.....	5	....	3	1	....	....	....	....	....	....	....	9
S. & A.....	48	63	40	....	48	24	18	12	8	4	1	266
Kennedy.....	....	....	....	....	4	10	6	....	16	....	....	36
Union.....	....	....	....	....	25	....	....	....	....	....	....	25
Buffalo.....	....	1	....	....	....	....	....	....	....	....	....	1
King.....	1	....	....	....	....	....	....	....	....	....	....	1
Columbia.....	2	....	....	....	....	....	....	....	....	....	....	2
Total.....	921	578	470	36	423	168	115	12	39	4	2	2,768

## SCHEDULE No. 17.

## METERS INSPECTED AND REPAIRED WITHOUT REMOVAL.

Meter.	5-inch.	5½-inch.	1-inch.	1½-inch.	2-inch.	3-inch.	4-inch.	5-inch.	6-inch.	10-inch.	
Crown . . . . .	199	101	42	1	50	29	35	....	9	....	466
Nash. .... . . .	15	9	19	..	....	....	....	....	....	....	43
Trident. .... . .	42	43	18	..	....	....	....	....	....	....	103
Hersey. .... . .	17	9	10	..	....	....	....	....	....	....	36
Lambert. .... . .	3	11	4	..	....	....	....	....	....	....	18
Keystone. .... . .	35	32	17	..	2	....	....	....	....	....	86
S. & A. .... . .	13	12	8	1	20	14	11	3	12	....	94
Worth. .... . .	49	68	160	27	167	32	2	....	....	....	505
Empire. .... . .	2	....	....	....	....	....	....	....	....	....	2
King. .... . .	2	....	....	....	....	....	....	....	....	....	2
Union. .... . .	....	....	....	....	8	....	....	....	....	....	8
Gem. .... . .	....	....	....	....	36	....	7	....	5	2	50
Kennedy. .... . .	....	....	....	....	6	19	17	....	53	....	95
Crest. .... . .	....	....	....	....	....	11	9	....	....	....	20
Total. .... . .	377	285	278	29	289	105	81	3	79	2	1,528

## SCHEDULE No. 18.

## NEW METER TAKERS.

Meter.	$\frac{5}{8}$ -inch.	$\frac{3}{4}$ inch.	1-inch.	$1\frac{1}{2}$ -inch.	2-inch.	3-inch.	4-inch.	6-inch.	
Crown .....	16	13	12	..	29	8	3	2	83
Nash .....	4	..	1	..	..	..	..	..	5
Trident .....	12	7	13	..	..	..	..	..	32
Hersey .....	15	1	1	..	..	..	..	..	17
Lambert .....	18	12	11	..	..	..	..	..	41
Keystone .....	8	12	11	..	1	..	..	..	32
Gem .....	..	..	..	..	14	1	2	..	17
Worth .....	1	1	10	6	12	..	..	..	30
Crest .....	..	..	..	..	..	..	1	..	1
Empire .....	1	..	..	..	..	..	..	..	1
Total .....	75	46	59	6	56	9	6	2	259

## SCHEDULE No. 19.

RETURN OF TEMPERATURE OF WATER FOR YEAR 1908, TAKEN AT THE SHORE CRIB AND THE CITY HALL TAP.

Month.	DEGREES FAHRENHEIT.					
	Shore Crib.			City Hall Tap.		
	Highest.	Lowest.	Average.	Highest.	Lowest.	Average.
January .....	38	35	36.51	41	38	39.38
February .....	36	33	34.41	39	36	37.28
March .....	37	32	34.00	37	35	36.38
April .....	41	34	35.96	41	37	38.91
May .....	44	36	40.68	46	41	43.40
June .....	48	39	41.76	50	44	45.68
July .....	62	40	44.80	61	44	48.44
August .....	58	42	48.64	60	46	51.16
September.....	63	42	53.66	64	46	56.68
October .....	54	40	48.06	56	45	51.25
November .....	53	39	41.13	48	42	44.71
December .....	42	36	38.19	45	40	41.79
Average for Year .....	48.0	37.33	41.48	49.00	41.16	44.58

## ANALYSIS OF TEMPERATURE.

*Shore Crib.*

The highest on September 27th, 63 deg. ; the lowest on March 10th, 32 deg. ; the lowest average in March, 34.00 deg.

*City Hall Tap.*

The highest on September 21st to 28th, 64 deg. ; the lowest on March 21st, 35 deg.; the lowest average in March, 36.38 deg.

## SCHEDULE No. 20.

## LEAKS ON MAINS REPAIRED DURING THE YEAR 1908.

The following leaks on mains were repaired during the year:

36-inch .....	12
30 " .....	3
24 " .....	8
20 " .....	
16 " .....	
12 " .....	74
10 " .....	2
8 " .....	4
6 " .....	104
4 " .....	9
3 " .....	1
Total.....	217 of all sizes.

The cost of repairing these leaks (exclusive of asphalt pavement repairs was :—

Labor .....	\$2,118 44
Material .....	148 98
Total.....	\$2,267 42

Average number of leaks per mile of Distribution.....	0 669
Average cost per mile .....	\$ 6 99
Average cost per leak (labor included) .....	10 44

## SCHEDULE No. 21.

## MAINTENANCE OF DISTRIBUTIONS, 1908.

## Work Done by Lombard Street Department, T. W. W.

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Months.	House Services.		Services Taken Out.		Leaks on Mains.		Leaks moved to sewer.
	Bursts.	False Reports.	Dug Out.	Cleared Out.	Turned On.	Turned Off.	
January . . . . .	167	84	95	64	182	170	44
February . . . . .	131	103	34	108	135	465	61
March . . . . .	156	122	42	66	143	293	101
April . . . . .	212	83	48	39	310	179	45
May . . . . .	125	58	16	44	155	50	26
June . . . . .	113	65	35	44	206	110	33
July . . . . .	172	55	15	56	323	119	21
August . . . . .	179	49	22	35	165	37	30
September . . . . .	177	57	21	92	246	167	6
October . . . . .	196	51	26	94	193	200	44
November . . . . .	183	39	77	77	217	115	31
December . . . . .	151	42	32	50	192	102	32
Total . . . . .	1962	809	325	769	2467	1997	474

36-inch.

24-inch.

20-inch.

16-inch.

10-inch.

8-inch.

6-inch.

4-inch.

3-inch.

2-inch.

1-inch.

1/2-inch.

1/4-inch.

1/8-inch.

1/16-inch.

1/32-inch.

1/64-inch.

1/128-inch.

1/256-inch.

1/512-inch.

1/1024-inch.

1/2048-inch.

1/4096-inch.

1/8192-inch.

1/16384-inch.

1/32768-inch.

1/65536-inch.

1/131072-inch.

1/262144-inch.



## INTEREST AND SINKING FUND.

Side-  
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completion seven were paid seventy-works done under contract. Aug 1907 of

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## SCHEDULE No. 22.

STATEMENT OF QUANTITY OF WATER PUMPED, AND THE COST OF PUMPING, FIGURED ON COAL, WAGES, MAINTENANCE, AND INTEREST AND SINKING FUND.

## MAIN PUMPING STATION.

Year.	Total Water Pumped Imp. Gallons	Total Fuel Pounds.	Cost of Fuel.	Wages.	Total Cost, including Repairs, Fuel, Wages, etc.	Fuel, Cost per 1,000 Gals.	Fuel and Wages, Cost per 1,000 Gals.	Total Working Expenses, including Collection of Revenue, including re-pumping.	Interest and Sinking Fund	Total Cost, including Fuel Wages, Maintenance, Interest and Sinking Fund	Total Cost per 1,000 Gals. on same.
					\$ c.	\$ c.	Cents.	\$ c.	Cents.	\$ c.	Cents.
1870.....	441,011,250				17,156 47	5,838 95	25,886 05	1.23	1.65	1.86	
1871.....	509,908,250				19,645 75	6,447 02	30,379 60	1.21	1.60	1.86	
1872.....	548,746,840				25,556 29	7,866 70	36,895 23	0.97	1.26	1.40	
1873.....	586,230,295				15,196 20	7,140 00	25,246 50	1.00	1.51	1.78	
1874.....	789,434,045				19,313 07	7,140 00	29,827 38	1.19	1.63	1.85	
1875.....	1,390,706,595	5,003,262			28,455 72	7,140 00	39,285 25	1.59	1.98	2.19	
1876.....	1,625,138,876	6,988,282			42,529 22	1.64	2.03	2.22			
1877.....	2,653,433,932	10,407,992			65,598 08	10,025 72	59,809 65	1.54	1.89	2.12	
1878.....	1,417,370,918	8,120,060			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1879.....	1,610,104,342	10,872,211			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1880.....	1,785,859,706	11,694,808			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1881.....	1,910,430,419	12,391,874			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1882.....	2,108,923,115	11,685,556			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1883.....	2,809,956,484	17,266,679			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1884.....	3,645,442,082	19,230,782			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1885.....	3,537,482,598	18,644,465			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1886.....	4,134,376,998	19,285,371			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1887.....	4,417,988,169	23,283,900			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1888.....	4,041,964,514	20,457,935			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1889.....	4,148,781,634	19,231,940			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1890.....	5,249,760,226	24,615,830			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1891.....	6,534,375,161	19,300,240			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1892.....	6,659,925,630	33,505,875			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1893.....	6,616,021,488	26,013,849			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1894.....	6,589,492,142	26,822,145			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1895.....	6,639,680,218	21,178,879			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1896.....	6,781,187,980	18,606,500			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1897.....	6,723,757,030	20,711,250			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1898.....	7,136,334,102	22,100,145			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1899.....	7,824,348,217	24,682,935			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1900.....	8,064,384,595	24,148,565			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1901.....	8,299,298,465	26,272,640			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1902.....	7,993,916,325	23,769,930			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1903.....	8,735,658,003	30,260,615			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1904.....	9,076,711,575	32,843,325			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1905.....	9,174,732,461	34,512,095			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1906.....	9,859,486,415	27,657,493			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1907.....	10,356,547,168	30,768,630			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24
1908.....	10,669,056,355	31,750,575			65,579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24

# Pavements, Roadways, Permanent Sidewalks, Plank Sidewalks and Repairs.

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CITY ENGINEER'S DEPARTMENT,  
Toronto, 31st December, 1908.

MR. C. H. RUST,  
*City Engineer.*

DEAR SIR,—Herewith I submit a report showing in general and detail, the extent and cost of all work done under the supervision of the Roadways Branch of the City Engineer's Department of Toronto for the year ending 31st of December, 1908.

The total number of works undertaken and carried to completion during the year was eight hundred and five, of which sixty-seven were laid by private contract under City inspection; one hundred and seventy-four of the remaining seven hundred and thirty-eight were works done by day labor, and five hundred and sixty-four were laid under contract. This is an increase over the number of works completed during 1907 of 104, and 260 over 1906.

A summary of works follows:—

Carried over from 1907 .....	86
Contract Works .....	564
Day Labor Works .....	174
Private Permanent Works .....	67
<hr/>	
	805

Classifying the year's work as pavements and sidewalks the total amount laid during 1908 represents 40.326 miles of pavements and 55.416 miles of permanent sidewalks. In addition to this there was constructed 15.424 miles of concrete curbing, which was built under separate contract. A reference to Table No. 2 shows that this is an increase in mileage of pavements constructed, as compared with 1907, of 5.925 miles, or 17 per cent.

The above mileage includes 0.204 miles of new track allowance and 8.280 miles of reconstruction of old track allowance. The balance of

31.842 miles represents new pavement construction, of which nearly all is of a permanent nature.

The asphalt pavement again proved to be the largest factor in the year's paving work, 21.031 miles of a total of 40.326 miles being laid. Of this 0.79 miles was resurfacing, and the remaining 20.241 miles was new work.

55.404 miles of concrete and brick walks were constructed. This is 2.905 miles less than the amount laid during 1907, but is greater than the output of any year prior to 1907.

The day labor system, which was introduced some years ago, by which the City Engineer tenders in competition with contractors, and if awarded the contract, constructs the work, was continued during 1908 at a great saving to the property owners. The City's tender was found to be lowest on 250 contracts—119 sidewalks, 54 pavements, 1 grading and 76 curbs; 14 sidewalks, 4 pavements, 1 grading and 1 curb were done by order of Council without the formality of calling for tenders. One hundred and forty of the total number (including those ordered by Council) were done by day labor, while of the remaining one hundred and thirty, one hundred and five were transferred to contractors at the City's figures, and the remainder carried over to 1909. By the continuance of this system a saving of \$32,800.87 was effected.

TABLE No. 1.

## CLASS OF PAVEMENTS &amp; ROADWAYS CONSTRUCTED.

	Number of Works.	
	1907.	1908.
Asphalt .....	76	106
Bitulithic .....	28	26
Concrete .....	6	8
Brick on Concrete .....	8	11
Vitrified Block (pavement) .....	13	13
Asphalt Block (pavement) .....	4	6
Wooden Block (treated) .....	4	—
Cedar Block (on concrete) .....	—	1
Cedar Block (on sand) .....	1	—
Granite Setts .....	1	—
Macadam .....	4	3
Macadam Reconstruction .....	2	2
Tar Macadam .....	2	—

TABLE No. 2.

## MILEAGE OF DIFFERENT CLASSES OF PAVEMENTS, ROADWAYS AND SIDEWALKS LAID FROM 1890 TO 1908.

Class of Work	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Pavements and Roadways.....	1.73	1,635	6,216	5,607	3,067	1,156	0,366	0,460	3,408	6,215	6,348	4,449	5,237	6,662	6,336	5,404	11,600	17,276	21,031
Asphalt.....																			
Bituminous.....																			
Cedar bark on soil & plk for Indian h	15.51	9,186	8,349	3,249	0,852	1,753	0,428	2,459	4,831	3,151	7,842	2,725	2,191	1,774	0,511	0,630	1,441	0,089	5,326
Macadam.....	0,123	0,494	0,059	1,663	1,661	0,510	2,089	5,013	2,503	2,733	5,486	2,737	1,940	3,373	1,591	1,434	0,973		
Tar macadam.....																			
Cobble.....	0,10	0,069	0,366	.....	.....	.....	.....	.....	.....	0,068	.....	.....	2,148	0,920	1,257	0,247	0,738	.....	.....
Tanarac on concrete.....	0,192	0,077	.....	.....	.....	.....	.....	.....	.....	0,068	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cedar block on concrete.....	.....	8,416	2,185	0,826	0,227	0,038	.....	0,084	0,079	0,079	0,021	0,028	0,028	0,021	0,069	0,069	0,500	0,500	0,060
Stone sets on concrete.....	0,138	0,705	3,743	2,563	0,085	0,117	.....	2,986	1,367	1,247	0,639	0,639	0,639	0,639	0,427	0,427	0,662	0,662	0,057
Seora on concrete.....																			
Asphalt block.....																			
Brick on concrete.....																			
Brick on gravel.....																			
Brick on broken stone.....																			
Treated wood blocks.....																			
Concrete pavements.....																			
(Gravel).....																			
Reconstruction of trackallow ice.....																			
Granite block track allowance.....																			
Vitrified block track allowance.....																			
Totals.....	17,670	11,090	19,574	18,748	8,154	5,816	3,553	13,208	24,642	21,120	24,666	15,629	17,413	16,839	14,756	17,902	25,097	34,401	39,326
Sidewalks:																			
Concrete.....	1,426	1,930	1,508	2,259	1,137	1,918	0,612	1,050	2,548	5,474	15,227	17,305	27,360	34,896	31,058	27,500	43,536	58,309	55,101
Stone lag.....	1,273	0,398	0,104	0,035	0,011	0,204	0,823	1,188	0,292	0,038	0,511	0,049	0,093	0,001	0,037	0,130	0,204	0,303	0,303
Brick.....																			
Totals.....	2,699	2,328	1,612	2,294	1,148	1,918	0,816	1,873	3,736	5,766	15,295	17,816	27,409	34,989	31,059	37,537	43,666	58,309	55,404



	Number of Works.	
	1907.	1908.
Construction of new track allowance:		
Vitrified Block* .....	2	—
Granite .....	—	2
Reconstruction of track allowance:		
Scoria, vitrified block and concrete.	12	20
Permanent Intersection T. A. ....	—	9
Grading .....	2	6
Brick Sidewalks .....	—	2
Concrete Sidewalks .....	428	430
Concrete Sidewalks (private contract)....	66	66
Brick Sidewalks (private contract).....	—	1
Concrete Curbing .....	42	93
	<hr/>	<hr/>
	701	805

The following table (Table No. 2) shows the past year's work classified under the various heads and compared with the work constructed during previous years. It will be seen that the mileage of asphalt, bithulitic and pavements of a permanent nature has increased, while such pavements as macadam and cedar blocks have made no gain whatever. The track allowance work is also largely in excess of that laid during 1907.

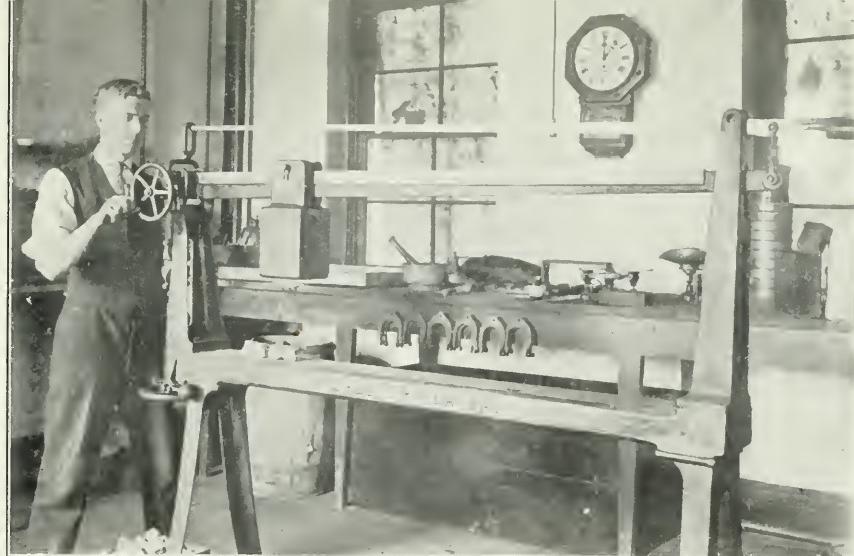
The following shows a comparison between the number of plans, drawings and estimates made during 1907 and 1908:—

	1907.	1908.
Roadway Plans .....	131	160
Detailed Drawings .....	24	35
Estimates .....	828	1,061

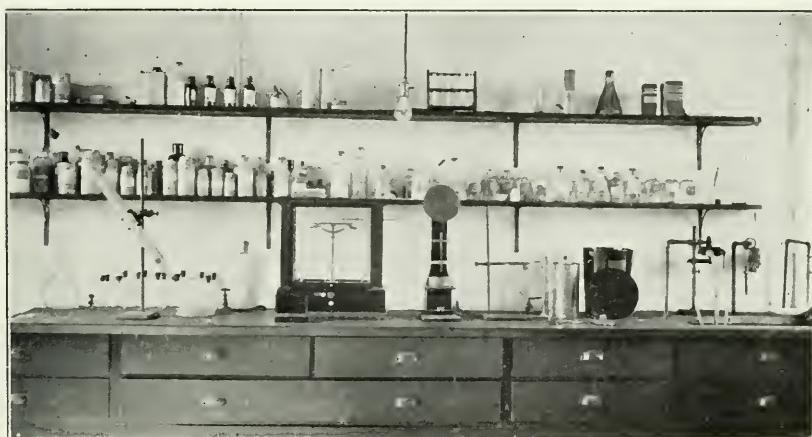
The first pavement laid under the Local Improvement System was constructed during the year 1881, and the annual variation in mileage of paved and unpaved streets, with classification of same, up to the end of 1908, is shown in the following table:—

TABLE No. 3.  
SHOWING THE DIFFERENT CLASSES OF PAVEMENTS AND ROADWAYS AND MILEAGE OF SAME FROM 1881 TO 1908.

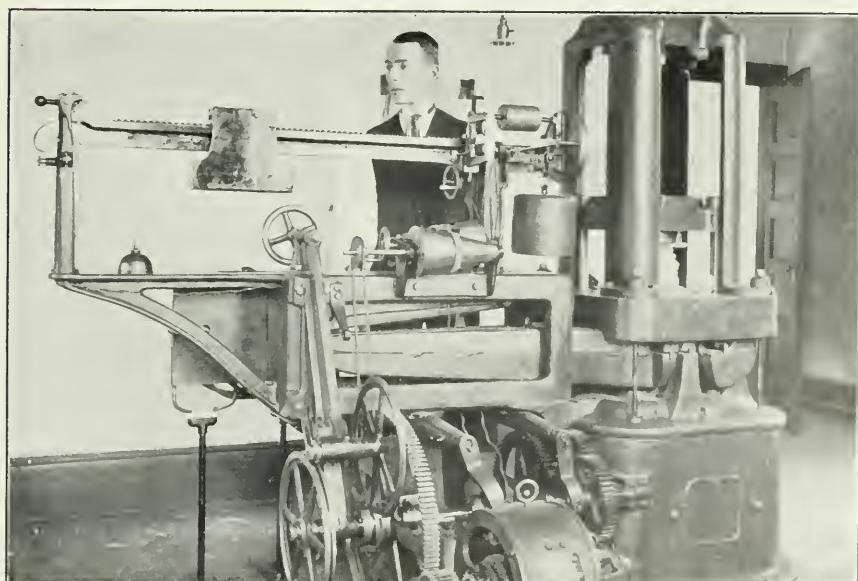
\* Including cedar block and macadam with paved track allowance respectively.



CEMENT TESTING



ANALYTICAL SECTION



50 TON UNIVERSAL TESTING MACHINE—TESTING LABORATORY



Table No. 4 shows the percentage of the different classes of pavements and roadways.

TABLE No. 4.

*Cedar Block .....	8.10
Stone and Scoria .....	0.77
Asphalt .....	33.03
Asphalt Block .....	0.31
Wood on Concrete (treated) .....	0.14
*Macadam .....	14.42
Tar Macadam .....	1.86
Bitulithic .....	5.12
Brick .....	7.80
Gravel .....	4.45
Concrete .....	0.50
Unpaved .....	23.50
	100.00

\*Including pavement with paved track allowance.

#### ASPHALT PAVEMENTS.

There were laid during the past year a total of one hundred and six asphalt pavements, of which 86 were of the light class, 17 were heavy pavements, and in 3 cases the old worn-out surface was stripped off and replaced with a new surface. The total yardage laid was 313.532 square yards, of which 60,229 square yards was of the heavy type, having 2-inch surface, 1-inch binder and 6-inch concrete foundation; 239,482 square yards of light pavement composed of 2-inch surface and 4-inch concrete foundation and 13,821 square yards of resurfacing, all of which consisted of 2-inch surface and 1-inch binder.

The above yardage represents 21.031 miles of asphalt pavement as against 17.276 miles laid during 1907.

It has been found in some instances, when the class of asphalt pavement to be laid was under consideration, that some doubt existed as to whether the light or heavy type of pavement should be used. In such cases it has been the custom to recommend the heavy type, thus being on the safe side. To meet such requirements it has been decided to establish a new class of asphalt pavement, having 2-inch surface, 1-inch binder, and 5-inch concrete foundation.

This pavement, while being slightly more costly than the light class, will be cheaper than the heavy type, and will be applicable in a great many cases where the other two are not.

It must be borne in mind that the above yardage includes concrete gutters, which were built on each side of the pavement in every case, and average 15 inches in width.

In 1904 a table was compiled showing the maximum, minimum and average price for heavy and light pavements from 1901 to 1904. Below is found this table brought to date by the addition of the prices which prevailed during 1908.

	Maximum.	Minimum.	Average.
1901 Heavy .....	\$2 70	\$2 30	\$2 54 $\frac{6}{10}$
" Light .....	2 23	1 88	2 04 $\frac{1}{2}$
1902 Heavy .....	2 60	2 45	2 54
" Light .....	2 15	1 66	2 01 $\frac{1}{4}$
1903 Heavy .....	2 50	2 14	2 21 $\frac{2}{3}$
" Light .....	1 88	1 60	1 70
1904 Heavy .....	2 30	2 15	2 22 $\frac{6}{10}$
" Light .....	1 83	1 53	1 65
1905 Heavy .....	2 19	1 99	2 05
" Light .....	1 66	1 36	1 51
1906 Heavy .....	2 04	1 79	1 91 $\frac{4}{5}$
" Light .....	1 64	1 38	1 42 $\frac{2}{3}$
1907 Heavy .....	2 27	2 14	2 19
" Light .....	1 83	1 50	1 62
1908 Heavy .....	2 33	1 92	2 15 $\frac{7}{9}$
" Light .....	1 96	1 33	1 51 $\frac{2}{3}$

This shows a decrease of 1.8 per cent. in the contract cost of heavy asphalt, and 6 per cent. in that of light asphalt, as compared with the prices prevailing during 1907.

During 1908 the City constructed by day labor a total of 19 asphalt pavements, or a length of 2.48 miles. The above mileage represents 35,735 square yards, and is eleven per cent. of the total yardage laid during the year.

In addition to this new work 49,965 square yards of repairs were laid, keeping those pavements which are out of guarantee in excellent condition. The average cost per square yard of repairs was 52 cents. This price includes an allowance for maintenance of plant, etc., and when compared with the contract price of 76 cents per square yard for 1907, shows a gain to the City of 24 cents per square yard, or a total saving of \$9,536.40.

In conjunction with asphalt pavements 66,932 lineal feet of concrete curb and gutter were placed during the year.

The quantities, prices, and other details connected with the asphalt pavements constructed during the year are tabulated in Tables Nos. 7 and 8. The physical and chemical analyses of the asphalt mixtures used in paving during the year are also tabulated separately.

Table No. 5 is a list of streets paved with asphalt on which the contractors' term of guarantee has expired.

TABLE No. 5.  
SHOWING STREETS PAVED WITH ASPHALT UPON WHICH THE CONTRACTORS'  
GUARANTEES HAVE EXPIRED.

Street.	From.	To.	Length Feet.	Date of Expiry of Guarantee.
Wellington.....	Church.....	Yonge .....	900	June 28, 1894
Sherbourne.....	Queen .....	Bloor .....	6,786	June 1, 1895
Ontario.....	Carlton.....	Howard .....	2,824	July 28, 1895
Sherbourne.....	King.....	Queen .....	1,160	July 2, 1895
Scott ....	Front .....	Colborne .....	374	Nov. 7, 1895
Wellington .....	Bay .....	York .....	848	July 18, 1896
Gerrard.....	Jarvis.....	Sherbourne .....	934	July 14, 1896
Sherbourne.....	The bridge.....	South Drive.....	1,076	Nov. 11, 1896
St. George.....	College .....	Bloor .....	3,286	Sept. 25, 1896
Adelaide.....	York.....	Spadina.....	3,001	July 21, 1897
Victoria.....	King.....	Adelaide .....	414	Sept. 1, 1897
Rose.....	Howard .....	Winchester .....	2,134	Sept. 1, 1897
St. James .....	Ontario .....	Parliament .....	595	Sept. 7, 1897
Devonshire Pl.....	Hoskin.....	Bloor .....	1,228	Sept. 30, 1897
Richmond .....	Victoria.....	Bay .....	852	June 27, 1898
Winchester.....	Parliament.....	Sunnach .....	1,512	Ang. 24, 1898
Munn's Lane .....	Wellington.....	218 ft. north .....	218	Ang. 23, 1898
Lane Around Inland Revenue Office .....	.....	.....	265	Oct. 5, 1898
Hoskin .....	St. George .....	Queen's Pk. Cr..	1,130	June 27, 1899
Carlton .....	Jarvis .....	Sherbourne.....	937	June 7, 1899
Bleecker .....	Carlton.....	Wellesley .....	1,412	July 5, 1899
Wellesley .....	Sherbourne.....	Parliament .....	1,227	Sept. 25, 1899
Cecil.....	Spadina.....	Beverley .....	1,052	Sept. 27, 1899
Adelaide .....	Yonge .....	Church .....	903	Nov. 8, 1899
King .....	Simecoe.....	Sherbourne .....	4,999	June 15, 1899
Leader Lane .....	King .....	Colborne .....	197	May 25, 1900
Avenue Road .....	Bloor .....	Davenport .....	2,289	Aug. 29, 1900
St. Patrick.....	McCauley .....	Beverley .....	606	Sept. 9, 1900
Victoria.....	Adelaide .....	Queen .....	694	Sept. 28, 1900
Lane 1st W. of Yonge.....	Adelaide .....	Temperance.....	177	May 28, 1901
Also lane running E. and W. from above lane.....	.....	.....	303	May 28, 1901
Leader Lane.....	Wellington.....	Colborne .....	193	May 25, 1901
Queen Street bridge .....	.....	At Don .....	134	July 25, 1905
Brunswick Ave.....	College .....	Ulster .....	1,262	Oct. 20, 1906
Aberdeen Ave.....	Ontario .....	222 ft. east .....	222	May 15, 1907
Berkeley.....	Gerrard .....	Carlton .....	677	Oct. 14, 1907

Street.	From.	To.	Length Feet.	Date of Expiry of Guarantee.
Front.....	Yonge .....	Church.....	942	June 30, 1907
Adelaide.....	Yonge .....	Bay .....	586	Aug. 17, 1907
Front.....	Lorne .....	Bay .....		
Bay .....	Melinda .....	Front .....		Fire District.
Carlton.....	Yonge .....	Jarvis .....	1,653	July 19, 1908
Jameson Ave....	King .....	Queen .....	1,181	Aug. 9, 1908
Jameson Ave....	King .....	G.T.R .....	1,254	Aug. 15, 1908
Euclid Ave....	College .....	Ulster .....	1,256	Sept. 13, 1908
York.....	King.....	Front .....	925	Aug. 31, 1908
Spencer Ave. .	King .....	Springhurst .....	1,470	Oct. 15, 1908
Colborne.....	Yonge .....	Church.....	902	Oct. 31, 1908
Sussex Ave.....	Spadina .....	St. George .....	872	Nov. 15, 1908
Willcock.....	St. George .....	Robert .....	1,260	July 11, 1908
Howard.....	Sherbourne.....	Parliament.....	1,417	Aug. 3, 1908
Yonge .....	Bloor .....	Davenport.....	1,010	Aug. 25, 1908
Queen .....	John .....	Bathurst .....	3,616	Oct. 22, 1908
Cowan .....	King .....	Queen .....	1,179	Nov. 7, 1908

## ASPHALT BLOCK PAVEMENT.

The use of asphalt block as a paving material was continued during the past year, 0.546 miles being laid, which represents a yardage of 9,469 square yards, compared with the 5,097 square yards laid prior to 1907; this year's yardage shows an increase of 4,372 square yards.

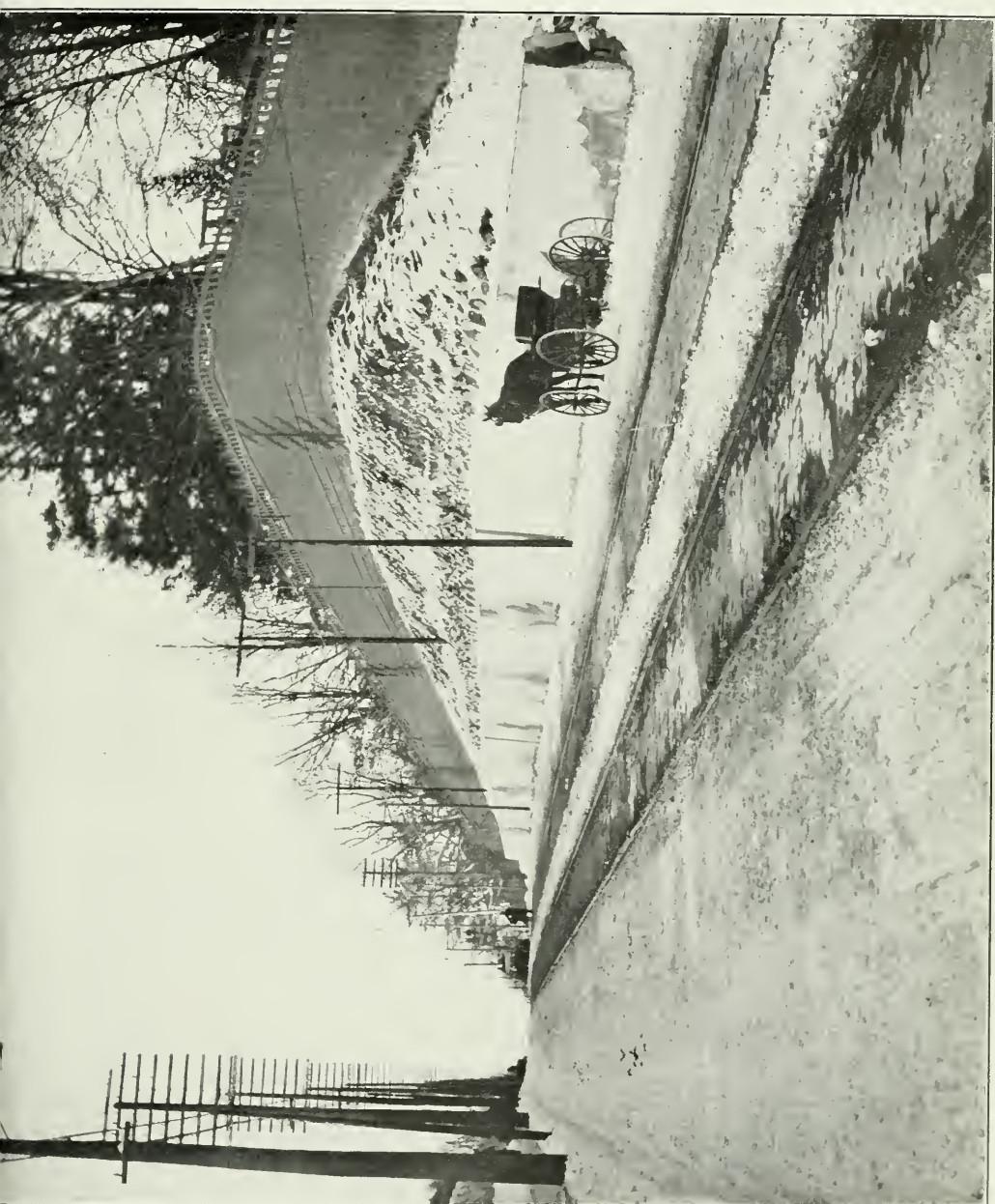
While the earlier pavements of this class consisted, except in one instance, of a 3-inch block resting on a  $\frac{1}{2}$ -inch mortar cushion, and a 4 or 6-inch concrete foundation, it has been decided to use 3-inch blocks on streets having moderate traffic, and 4-inch blocks on very heavily travelled streets.

In conjunction with asphalt block pavements 5,764 lineal feet of concrete gutter were constructed.

## BRICK AND VITRIFIED BLOCK PAVEMENTS.

During the year there were constructed 11 brick pavements and 13 vitrified block pavements, which aggregate 16,642 square yards, and 14,106 square yards respectively, or a total yardage of 30,748 square yards. This is 15,669 square yards less than the amount laid during 1907.

CONCRETE RETAINING WALL, AVENUE ROAD





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The above yardage represents a total mileage of 2.353 miles.

This class of material makes a very durable pavement, but is not laid extensively owing to the strong prejudice of the public against it because of the noise created by wheeled traffic.

In nearly every instance Canadian block was used in preference to the American product. This was largely due to the high price of the latter, which was in the neighborhood of \$30 per thousand delivered on the street.

In connection with brick pavements 12,191 lineal feet of concrete curbing were placed.

The quality of the blocks, as determined by the standard abrasion test, is indicated by the following ratio:

Canadian (after 1,000 revols.) 14.8 per cent.

American (after 1,000 revols.) 12.0 per cent.

Canadian (after 2,000 revols.) 23.1 per cent.

American (after 2,000 revols.) 18.0 per cent.

#### TRACK ALLOWANCE CONSTRUCTION AND RECONSTRUCTION.

There was completed during the year 0.204 miles of new granite block track allowance, and 8.280 miles of track allowance reconstruction. Compared with last year this shows an increase of 2.010 miles in this class of work.

Although this work is largely of a temporary nature, it is a vast improvement on the previous condition of the tracks, and adds greatly to the comfort and safety of the travelling public.

Since 1906, when the renewal of worn-out track allowances was commenced on a systematic basis, 20.769 miles of work has been completed, and it is the intention to carry on during the coming season the thorough repair of such tracks as are in bad condition.

In the case of new track work it is the intention to change the cross section of the foundation by making it a uniform depth of 12 inches. The width of the track allowance on all such new work has also been extended from 16 ft. 6 in. to 18 ft. This latter change is due to the increased width of the devil strip, which in future will be made 5 ft. in width.

In addition to the general reconstruction work on track allowances completed during the year, a number of main intersections, some of

which were in a very dilapidated condition, were torn up and replaced with new steel on a 12-inch concrete foundation, paving blocks being laid after the steel had been placed.

The details of these intersections are found in Table No. 7.

The following table shows the streets on which new steel has been laid since 1906.

Year.	Street.	From.	To.	Class of Steel.	Length of Track.
*1906	Dupont . . .	Bathurst . . .	Christie . . .	7-in.—90 lb.	1918 lin. ft. double
*1906	Dupont . . .	Walmer . . .	Bathurst . . .	7 " —90 "	1634 " "
*1906	Gerard . . .	Leslie . . .	Greenwood . . .	7 " —90 "	1396 " "
*1906	Gerard . . .	Pape . . .	Leslie . . .	7 " —90 "	1977 " "
*1906	Lansdowne . . .	College . . .	Bloor . . .	7 " —90 "	2850 " "
*1906	Richmond . . .	York . . .	Victoria . . .	7 " —90 "	1925 " "
*1906	Scott . . . . .	Front . . .	Wellington . . .	7 " —90 "	299 " single
*1906	Victoria . . .	Richmond . . .	Qneen . . . .	7 " —90 "	298 " double
*1906	Wellington . . .	Scott . . .	Yonge . . .	7 " —90 "	298 " single
*1906	Lansdowne and College . . . . .	241 ft. n. Cot-	ttingham . . .	7 " —90 "	117 " double
*1906	Dovercourt . . .	Bloor . . . . .	St. Clair . . .	7 " —90 "	1736 " "
*1906	Queen . . . . .	Yonge . . . . .	Van Horne . . .	7 " —90 "	3390 " "
*1906	College . . . . .	Grace . . . . .	Spadina . . . .	7 " —90 "	4556 " "
*1906	Gerard . . . . .	Bridge . . . . .	Munro . . . . .	7 " —90 "	1600 " "
*1906	Gerard . . . . .	Bridge . . . . .	200 ft. west . . .	7 " —90 "	328 " "
*1907	King . . . . .	Spadina . . . . .	Sherbourne . . .	7 " —90 "	200 " "
*1907	King . . . . .	Don . . . . .	Broadview . . .	7 " —90 "	6973 " "
*1907	Queen . . . . .	Spadina . . . . .	Bathurst . . . . .	7 " —90 "	1117 " "
*1907	Queen . . . . .	Kingston Rd. . .	Woodbine . . . .	7 " —90 "	1993 " "
*1907	Queen . . . . .	Pape . . . . .	G.T.R . . . . .	7 " —90 "	1887 " "
*1907	Yonge . . . . .	Bloor . . . . .	C.P.R . . . . .	7 " —90 "	2165 " "
*1907	Roncesvalles . . .	Queen . . . . .	Dundas . . . . .	7 " —90 "	3962 " "
*1908	Bloor . . . . .	Dufferin . . . . .	Lansdowne . . . .	7 " —90 "	4944 " "
*1908	College . . . . .	Spadina . . . . .	McCaull . . . . .	7 " —90 "	1956 " "
*1908	Front . . . . .	Yonge . . . . .	Church . . . . .	7 " —90 "	1697 " "
*1908	Front . . . . .	York . . . . .	Simeoe . . . . .	7 " —90 "	950 " "
*1908	King . . . . .	Spadina . . . . .	Bathurst . . . . .	7 " —90 "	630 " single
*1908	Queen . . . . .	Bathurst . . . . .	Dundas . . . . .	7 " —90 "	2020 " double
*1908	Queen . . . . .	Roncesvalles around Sun-	7 " —90 "	4035 " "	
*1908	Spadina . . . . .	nyside Loop . . . . .	7 " —90 "	490 " "	
*1908	Springhurst . . . . .	s. s. Spadina Crescent . . .	Bloor . . . . .	7 " —90 "	2345 " "
*1908	Springhurst . . . . .	Dufferin—west and south . . .	4½" — . . . "	573 " single	

\* T-Rail laid.

† Flange Rail laid.

## CEDAR BLOCK PAVEMENT.

Only one cedar block pavement was laid during the current year, having a mileage of 0.06 miles.

In connection with this class of pavement, 621 lineal feet of concrete curbing was constructed.

Tables Nos. 7 and 8 show in detail the quantities and cost of the cedar block pavement laid during the year.

Table No. 6 shows the sections of streets on which the final assessments for pavements have been or will be paid during the ensuing year. Many of these pavements are beyond repair.

TABLE No. 6.

## LIST SHOWING DATE OF FINAL ASSESSMENT ON DIFFERENT CLASSES OF PAVEMENT.

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid
Adelaide .....	York .....	Spadina .....	Asphalt .....	1892	1900
Adelaide .....	Bay .....	York .....	Cedar Block .....	1899	1904
Adelaide .....	Yonge .....	Church .....	Asphalt .....	1894	1904
Afton Ave .....	Lisgar .....	Northoeote .....	Gravel .....	1898	1901
Alma .....	Gladstone .....	Dufferin .....	Cedar Block .....	1901	1906
Amelia .....	Sumach .....	Parliament .....	Brick .....	1895	1906
Argyle .....	Dundas .....	Gladstone .....	Cedar Block .....	1895	1900
Arthur .....	Bathurst .....	Euclid .....	" ..	1898	1903
Argyle .....	Dundas .....	Shaw .....	" ..	1900	1905
Arthur .....	Euclid .....	Dundas .....	" ..	1900	1905
Avenue Rd .....	Bloor .....	Davenport .....	Asphalt .....	1895	1905
Avenue Pl .....	Avenue Rd .....	Hazelton .....	Macadam .....	1901	1906
Adelaide .....	Yonge .....	Bay .....	Asphalt .....	1897	1907
Avenue Rd,T.A.	Dupont .....	260 ft. s. of north City limits .....	Brick .....	1903	1908
Balmuto .....	Bloor .....	Czar .....	Asphalt .....	1901	1906
Barton Ave .....	Manning .....	Euclid .....	Cedar Block .....	1890	1900
Barton Ave .....	Palmerston .....	Euclid .....	" ..	1892	1897
Barton Ave .....	Brunswick .....	Howland .....	" ..	1892	1898
Bathurst .....	S. side of Bridge .....	North Ry. Gate .....	" ..	1886	1897
Bathurst .....	Front .....	Niagara .....	" ..	1898	1903
Bay .....	King .....	Queen .....	Asphalt .....	1891	1899
Bay .....	Front .....	Esplanade .....	Cedar Block .....	1899	1904
Beaconsfield Ave .....	Queen .....	Afton .....	Gravel .....	1898	1901
Beaconsfield Ave .....	Afton .....	Dundas .....	" ..	1898	1901
Beatty Ave .....	King .....	Queen .....	Cedar Block .....	1899	1904
Beau .....	Elm .....	South Drive .....	Macadam .....	1900	1905

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assess'n Paid.
Bellwoods Ave.	Queen . . . .	Mansfield . . . .	Cedar Block	1900	1905
Beverley	Queen . . . .	College . . . .	Macadam . . . .	1896	1901
Berryman	Davenport . . . .	Hazelton . . . .	Cedar Block . . . .	1900	1905
Birch Ave.	Yonge . . . .	West terminus . . . .	" . . . .	1890	1900
Bismarck Ave.	Yonge . . . .	Park Road . . . .	Macadam . . . .	1891	1897
Bismarck Ave.	Park Rd. . . .	East end . . . .	Cedar Block . . . .	1891	1897
Bleecker	Carlton . . . .	Wellesley . . . .	Asphalt . . . .	1894	1902
Blevins	Sunnich . . . .	East end . . . .	Cedar Block . . . .	1896	1897
Bloor	Bathurst . . . .	Clinton . . . .	" . . . .	1889	1901
Bloor	Shaw . . . .	Dufferin . . . .	" . . . .	1890	1901
Bloor	Clinton . . . .	Shaw . . . .	" . . . .	1891	1901
Bloor	Dufferin . . . .	Lansdowne . . . .	" . . . .	1894	1901
Bolton Ave.	Queen . . . .	Gerrard . . . .	" . . . .	1898	1903
Booth Ave.	Queen . . . .	Eastern . . . .	" . . . .	1891	1896
Borden	Ulster . . . .	Bloor . . . .	" . . . .	1900	1905
Breadalbane	Yonge . . . .	St. Vincent . . . .	Macadam . . . .	1902	1905
Brighton Ave.	Pape . . . .	East end . . . .	Cedar Block . . . .	1890	1899
Broadview Ave.	Withrow . . . .	Danforth . . . .	" . . . .	1890	1898
Broadview Ave.	Queen . . . .	Gerrard . . . .	" . . . .	1887	1897
Broadview Ave.	Gerrard . . . .	Withrow . . . .	Cedar Block . . . .	1887	1897
Broadview Ave.	Queen . . . .	Eastern . . . .	" . . . .	1891	1896
Broadway Place	Spadina . . . .	159 ft. 3 in. west.	" . . . .	1899	1904
Brock Ave.	Railway tracks	Dundas . . . .	Gravel . . . .	1898	1901
Brooke Ave.	Logan . . . .	Howland . . . .	Cedar Block	1888	1898
Brock Ave.	Dundas . . . .	1,000 ft. s. Bloor.	Macadam . . . .	1901	1906
Brooklyn	Queen . . . .	Dagmar . . . .	" . . . .	1901	1906
Brunswick Ave.	College . . . .	Ulster . . . .	Asphalt . . . .	1896	1906
Bruce	Shaw . . . .	Givens . . . .	Cedar Block	1892	1897
Berkeley	Gerrard . . . .	Carlton . . . .	Asphalt . . . .	1897	1907
Bellevue Ave.	Bellevue Pl. . . .	Oxford . . . .	Brick . . . .	1897	1907
Bulwer St.	Soho . . . .	Spadina . . . .	Cedar Block	1902	1907
Bathurst	King . . . .	Front . . . .	Granite Sett . . . .	1903	1908
Cær-Howell	McCaull . . . .	Simcoe . . . .	T.A. pav't. . . .	1902	1905
Cær-Howell	University . . . .	Simcoe . . . .	Macadam . . . .	1902	1905
Casimir	St. Patrick . . . .	North to a lane . . . .	Cedar Block . . . .	1889	1898
Cameron	Queen . . . .	Cameron Pl. . . .	Brick on gravel . . . .	1899	1905
Carlaw Ave.	Queen . . . .	Eastern . . . .	Cedar Block . . . .	1889	1899
Carlaw Ave.	Eastern . . . .	Bay . . . .	" . . . .	1885	1897
Carlton	Sackville . . . .	Sunnich . . . .	Macadam . . . .	1898	1903
Carlton	Jarvis . . . .	Sherbourne . . . .	Asphalt . . . .	1894	1904
Carlyle	St. Patrick . . . .	376 feet north . . . .	Cedar Block . . . .	1899	1904
Caroline	Queen . . . .	Eastern . . . .	" . . . .	1889	1899
Carr	Esther . . . .	End of Carr . . . .	" . . . .	1894	1899
Cecil	Spadina . . . .	Beverley . . . .	Asphalt . . . .	1894	1904
Charles	Church . . . .	Jarvis . . . .	Cedar Block . . . .	1897	1902
Christie	Bloor . . . .	Melville . . . .	" . . . .	1891	1898
Churchill	Term. of pav'n't	136 feet east . . . .	" . . . .	1893	1898
Clara	Oak . . . .	Orford . . . .	" . . . .	1886	1896

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Clarence Sq . . .	North, East and	South sides . . . .	Cedar Block . . . .	1898	1903
Claremont . . . .	Arthur . . . .	Mansfield . . . .	" . . . .	1900	1905
Claremont . . . .	Robinson . . . .	Arthur . . . .	" . . . .	1900	1906
Classic Pl. . . .	Huron . . . .	East end . . . .	Macadam . . . .	1897	1902
Clifford . . . .	Stafford . . . .	Strachan . . . .	Cedar Block . . . .	1887	1897
Clinton . . . .	Mansfield . . . .	College . . . .	" . . . .	1899	1904
Cluny Ave . . . .	Roxborough . . . .	Crescent Rd. . . .	" . . . .	1891	1897
Cluny Ave . . . .	Crescent Rd. . . .	Rosedale . . . .	Macadam . . . .	1901	1906
Colborne. . . .	Church . . . .	West Market . . . .	Cedar Block . . . .	1898	1903
Collahie . . . .	Gladstone . . . .	Beaconsfield . . . .	Gravel . . . .	1899	1902
Cottingham . . . .	1,350 ft. west of				
	Yonge . . . .	Avenue Rd . . . .	Cedar Block . . . .	1886	1896
Cottingham . . . .	Rathnally . . . .	Poplar Plains Rd. . . .	" . . . .	1889	1899
Coolmine . . . .	Dundas . . . .	St. Anne's . . . .	Macadam . . . .	1901	1906
Crawford . . . .	Arthur . . . .	North end . . . .	Brick on gravel . . . .	1899	1905
Crescent Rd. . . .	Yonge . . . .	Rosedale Rd . . . .	Macadam . . . .	1899	1904
Crocker. . . .	Bellwoods. . . .	Claremont . . . .	Cedar Block . . . .	1890	1900
Czar. . . .	Yonge . . . .	North . . . .	Asphalt . . . .	1893	1901
Concord . . . .	College . . . .	Dewson. . . .	Cedar Block . . . .	1901	1906
Carlton Ave. . . .	Ontario . . . .	222 feet east . . . .	Asphalt . . . .	1897	1907
Carlton St . . . .	Sumach . . . .	399½ feet east . . . .	Brick . . . .	1902	1907
Cross . . . .	Beaconsfield . . . .	Gladstone . . . .	Brick . . . .	1902	1907
Concord Ave. . . .	Dewson . . . .	180 ft. south Hepburne. . . .	Cedar Block . . . .	1902	1907
Clarence . . . .	Wellington . . . .	218½ ft. north . . . .	Brick . . . .	1903	1908
College . . . .	Bathurst . . . .	Lansdowne . . . .	Cedar Block . . . .	1903	1908
Church . . . .	Front . . . .	Espalade . . . .	" . . . .	1903	1908
Cowan . . . .	King . . . .	Queen . . . .	Asphalt . . . .	1898	1908
Colborne . . . .	Yonge . . . .	Church . . . .	" . . . .	1898	1908
Carlton . . . .	Yonge . . . .	Jarvis . . . .	" . . . .	1898	1908
D'Arcy . . . .	McCaull . . . .	Spadina . . . .	Cedar Block . . . .	1895	1900
Darling. . . .	North term. . . .	End of sewer. . . .	" . . . .	1891	1896
Davenport Rd . . . .	Yonge . . . .	Hazelton . . . .	Macadam . . . .	1898	1903
Davenport Rd . . . .	Avenue Rd . . . .	636 feet west . . . .	" . . . .	1900	1905
Davies Ave. . . .	Queen . . . .	Matilda . . . .	Cedar Block . . . .	1894	1899
Defoe . . . .	Tecumseh . . . .	Niagara . . . .	" . . . .	1890	1900
Delaware Ave . . . .	College . . . .	Bloor . . . .	" . . . .	1892	1897
Delaware Ave . . . .	Bloor . . . .	Van Horne . . . .	" . . . .	1891	1897
Devonshire Pl. . . .	Hoskin . . . .	Bloor . . . .	Asphalt . . . .	1892	1902
Dewson. . . .	Ossington . . . .	Dovercourt . . . .	Cedar Block . . . .	1890	1900
Division . . . .	Spadina . . . .	Huron . . . .	Macadam . . . .	1899	1904
Dovercourt Rd . . . .	Bloor . . . .	Van Horne . . . .	Cedar Block . . . .	1891	1901
Dovercourt Rd . . . .	Queen . . . .	Dundas . . . .	Gravel . . . .	1898	1901
Dovercourt Rd . . . .	Dundas . . . .	Churchill . . . .	Cedar Block . . . .	1900	1906
Dovercourt Rd . . . .	College . . . .	Bloor . . . .	" . . . .	1901	1906
Dufferin . . . .	Peel . . . .	Dundas . . . .	Gravel . . . .	1898	1901
Dufferin . . . .	King . . . .	G.T.R . . . .	Cedar Block . . . .	1889	1898
Dufferin . . . .	Bloor . . . .	Union . . . .	" . . . .	1891	1901

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Dufferin . . . . .	Dundas . . . . .	Lindsay . . . . .	Macadam . . . . .	1899	1904
Dunn Ave. . . . .	Queen . . . . .	Lake . . . . .	Gravel . . . . .	1898	1901
Dunbar Rd . . . . .	Elm . . . . .	South Drive . . . . .	Cedar Block . . . . .	1890	1900
Dundas . . . . .	Soranren . . . . .	Bloor . . . . .	" . . . . .	1893	1898
Dundas . . . . .	Ossington . . . . .	Lansdowne . . . . .	" . . . . .	1900	1905
Dupont . . . . .	Bathurst . . . . .	Manning . . . . .	" . . . . .	1892	1897
Dovercourt Rd . . . . .	Queen . . . . .	Armour . . . . .	Brick . . . . .	1902	1907
Duncan . . . . .	King . . . . .	Adelaide . . . . .	" . . . . .	1902	1907
Dean . . . . .	Wilton . . . . .	204 ft. north . . . . .	Cedar Block . . . . .	1902	1907
Delaney Cres. . . . .	Brock . . . . .	Wyndham . . . . .	" . . . . .	1902	1907
Dufferin . . . . .	Bloor . . . . .	C.P.R. . . . .	Macadam . . . . .	1906	1907
Davenport . . . . .	636 ft. e. Avenue Rd. . . . .	Dupont . . . . .	" . . . . .	1906	1907
Drummond Pl . . . . .	Adelaide . . . . .	198 ft. north . . . . .	Brick . . . . .	1903	1908
Dovercourt Rd . . . . .	Churchill . . . . .	College . . . . .	Cedar Block . . . . .	1903	1908
Earnbridge . . . . .	Strickland Pl. . . . .	100 ft. west . . . . .	Macadam . . . . .	1901	1906
Earl . . . . .	Sherbourne . . . . .	West term . . . . .	Asphalt . . . . .	1893	1898
Elgin Ave. . . . .	Avenue Rd. . . . .	Bedford Rd . . . . .	Macadam . . . . .	1899	1904
Elliott . . . . .	Broadview . . . . .	Bolton . . . . .	Cedar Block . . . . .	1898	1903
Elm Grove . . . . .	King . . . . .	Queen . . . . .	Gravel . . . . .	1898	1901
Elm . . . . .	Yonge . . . . .	University . . . . .	Macadam . . . . .	1899	1902
Empress Cres. . . . .	Dowling . . . . .	Jameson . . . . .	Cedar Block . . . . .	Parkdale	1897
Empress Cres. . . . .	Dunn . . . . .	Jameson . . . . .	" . . . . .	1893	1898
Euclid Ave. . . . .	Arthur . . . . .	College . . . . .	" . . . . .	1897	1902
Euclid Ave. . . . .	Bloor . . . . .	Follis . . . . .	" . . . . .	1890	1898
Euclid Ave. . . . .	Arthur . . . . .	Robinson . . . . .	" . . . . .	1899	1904
Euclid Pl. . . . .	Euclid Ave. . . . .	East term . . . . .	" . . . . .	1893	1899
Evans Ave. . . . .	Clinton . . . . .	West term . . . . .	" . . . . .	1892	1898
Euclid Ave. . . . .	College . . . . .	Ulster . . . . .	Asphalt . . . . .	1898	1908
Farquhar Lane . . . . .	Front . . . . .	Esplanade . . . . .	Cobblestone . . . . .	1900	1905
Ferning . . . . .	Queen . . . . .	Humbert . . . . .	Brick . . . . .	1897	1903
First Ave . . . . .	Broadview . . . . .	Logan . . . . .	Macadam . . . . .	1899	1904
Florence . . . . .	Dufferin . . . . .	Brock . . . . .	Cedar Block . . . . .	1899	1904
Frankish . . . . .	Brock . . . . .	Sheridan . . . . .	" . . . . .	1890	1899
Frizzell . . . . .	Carlaw . . . . .	Pape . . . . .	" . . . . .	1891	1900
Front . . . . .	Sherbourne . . . . .	Trinity . . . . .	Macadam . . . . .	1899	1902
Front . . . . .	George . . . . .	Sherbourne . . . . .	" . . . . .	1899	1902
Foxley . . . . .	Dundas . . . . .	Dovercourt . . . . .	Gravel . . . . .	1898	1901
Front . . . . .	Yonge . . . . .	Church . . . . .	Asphalt . . . . .	1897	1907
Front, T.A. . . . .	Simcoe . . . . .	Bathurst . . . . .	Brick . . . . .	1903	1908
Front . . . . .	Simcoe . . . . .	John . . . . .	Stone Paving Bl'k P'v'm't	1903	1908
Foxbar . . . . .	Avenue Rd . . . . .	St. Clair . . . . .	Grading . . . . .	1907	1908
Gerrard . . . . .	Broadview . . . . .	Howland . . . . .	Cedar Block . . . . .	1888	1897
Gerrard . . . . .	Jarvis . . . . .	Sherbourne . . . . .	Asphalt . . . . .	1891	1901
Gerrard . . . . .	Yonge . . . . .	Jarvis . . . . .	Macadam . . . . .	1899	1904
Gildersleeve . . . . .	Sumach . . . . .	East end . . . . .	Cedar Block . . . . .	1894	1899

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Givens .....	Queen .....	Argyle .....	Macadam .....	1898	1903
Gladstone .....	Queen .....	Dundas .....	Cedar Block.	1897	1902
Gloucester .....	Yonge .....	Church .....	Macadam .....	1903	1906
Gordon .....	Sheridan .....	Dufferin .....	Cedar Block.	1891	1896
Grange .....	Huron .....	Spadina .....	Macadam .....	1903	1906
Grace .....	Arthur .....	College .....	Cedar Block.	1891	1902
Grafton Ave .....	Roncesvalles .....	Triller .....	" .....	1891	1899
Grand Opera House Lane	Adelaide .....	149 feet south .....	Concrete .....	1896	1902
Grange Rd .....	Beverley .....	McCaull .....	Macadam .....	1900	1903
Grange Ave .....	Spadina .....	Esther .....	Brick .....	1897	1903
Grange Ave .....	Beverley .....	Huron .....	Macadam .....	1902	1905
Grenville .....	Yonge .....	Surrey Pl. ....	" .....	1899	1905
Grant .....	Kintyre .....	North term .....	Cedar Block.	1890	1900
Grosvenor .....	Yonge .....	Queen's Park .....	Gravel .....	1900	1903
Gwynne Ave .....	King .....	Queen .....	Cedar Block.	1898	1903
Givens .....	Argyle .....	Halton .....	" .....	1902	1907
Grant .....	Queen .....	Kintyre .....	" .....	1902	1907
Givens .....	College .....	Bloor .....	Brick .....	1903	1908
Halton .....	Shaw .....	Dundas .....	Cedar Block.	1892	1897
Hamburg Ave .....	Bloor .....	Union .....	" .....	1891	1899
Hamilton .....	Paul .....	Elliott .....	" .....	1890	1899
Hamilton .....	Queen .....	Paul .....	" .....	1891	1896
Harbord .....	Huron .....	Bathurst .....	" .....	1897	1902
Harbord .....	St. George .....	Huron .....	Macadam .....	1898	1903
Henderson .....	Clinton .....	Grace .....	Cedar Block.	1891	1898
Henderson .....	Manning .....	Clinton .....	" .....	1900	1905
Herrick .....	Bathurst .....	Lippincott .....	" .....	1892	1897
Heward Ave .....	Queen .....	Eastern Ave .....	" .....	1889	1899
Henry .....	College .....	Baldwin .....	Brick .....	1896	1906
Hickson .....	St. Claren .....	294 feet east .....	Macadam .....	1900	1905
High Park Ave .....	Roncesvalles .....	High Park .....	Cedar Block.	1893	1899
Hoskin Ave .....	St. George .....	Q's P'k Cr. Drive .....	Asphalt .....	1894	1904
Howard Park Av .....	Dundas .....	Roncesvalles .....	Cedar Block.	1891	1901
Howie .....	Clark .....	North end .....	" .....	1889	1899
Humbert .....	Dovercourt .....	Dundas .....	" .....	1898	1903
Huntley .....	Bridge .....	Elm .....	" .....	1890	1900
Huron .....	Pheebe .....	Grange .....	" .....	1893	1898
Huron .....	Bernard .....	Dupont .....	Macadam .....	1901	1906
Howard .....	Sherbourne .....	Parliament .....	Asphalt .....	1898	1908
Isabella .....	Sherbourne .....	Jarvis .....	Macadam .....	1898	1901
Isabella .....	Yonge .....	Jarvis .....	" .....	1901	1906
Jarvis .....	King .....	Queen .....	" .....	1896	1899
Jarvis .....	Queen .....	Bloor .....	Asphalt .....	1889	1899
John .....	King .....	Queen .....	Cedar Block.	1890	1900
John .....	King .....	Front .....	Macadam .....	1895	1899
John .....	Bridge .....	Lake .....	" .....	1898	1903

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessmt Paid.	
Johnston's Lane	Adelaide .....	South end .....	Brick .....	1897	1903	
Jordan .....	Wellington .....	King .....	Asphalt .....	1891	1899	
Jameson Ave .....	King .....	Queen .....	" .....	1898	1908	
Jameson Ave .....	King .....	G.T.R .....	" .....	1898	1908	
King .....	334 ft. west of Jefferson.	1,900 ft. east .....	Tamarac .....	1891	1899	
King .....	Simcoe .....	Sherbourne .....	Asphalt .....	1893	1903	
King .....	Berkeley .....	236 ft. e. River .....	Cedar Block .....	1901	1906	
Lane s. King .....	e.s. Leader Lane	End of Lane .....	Concrete .....	1895	1905	
Lane bet. St. Pat- rick & D'Arcy	Huron .....	Beverley .....	Cedar Block .....	1892	1897	
Lane s. Pearl .....	Near Simcoe .....	.....	Cobble .....	1892	1897	
Lane e. of Spa- dina .....	Grange .....	St. Patrick .....	" .....	1892	1897	
Lane s. of Pearl .....	Simcoe .....	York .....	" .....	1892	1897	
Lane bet. Yonge Gould .....	and Victoria .....	Wilton .....	" .....	1887	1897	
Lane bet. Yonge .....	and Victoria .....	Adelaide .....	106 ft. south .....	" .....	1892	1897
Lane bet. York .....	North of Pearl .....	Near Adelaide .....	Cedar Block .....	1888	1898	
Lane 1st north of Queen .....	Mutual .....	Jarvis .....	" .....	1888	1898	
Lane n. of Wil- ton Cres .....	Pembroke .....	George .....	" .....	1888	1898	
Lane bet. Queen and Richmond .....	Church .....	East terminus .....	Cobble .....	1888	1898	
Lane 1st west of Yonge .....	Temperance .....	n.s. Adelaide .....	Asphalt .....	1896	1906	
Lane lying bet. Temperance & Adelaide St. .....	Comm'cing at a point 89 $\frac{1}{2}$ ft. w. of Yonge St. thence w. 313 $\frac{1}{2}$ ft. ....	.....	" .....	1896	1906	
Lane s. of Queen .....	Tecumseth .....	Niagara .....	Cobble .....	1893	1898	
Lane rear of John .....	Adelaide .....	Lane n. of Arling- ton Hotel .....	Cedar Block .....	1892	1898	
Lane e. of Bay .....	Wellington .....	214 ft. south .....	" .....	1888	1899	
Lane 1st e. of Bay .....	Wellington .....	Melinda .....	Concrete .....	1895	1900	
Lane n. of Foxley .....	Foxley .....	135 ft. north .....	Cedar Block .....	1889	1899	
Lane 1st s. of Q'u .....	Simcoe .....	Duncan .....	" .....	1889	1899	
Lane bet. Borden and Lippincott .....	Ulster .....	Bloor .....	" .....	1891	1896	
Lane rear Standard Bank .....	.....	.....	Scoria .....	1892	1902	
Lane rear Inland Revenue Office .....	.....	.....	Asphalt .....	1893	1901	
Lansdowne .....	Queen .....	Union .....	Gravel .....	1898	1901	
Lansdowne .....	Dundas .....	Bloor .....	Cedar Block .....	1889	1899	
Leader Lane .....	King .....	Colborne .....	Asphalt .....	1895	1905	

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Leader Lane ..	Wellington ..	Colborne .....	Asphalt .....	1896	1906
Leslie .....	Queen .....	Ashbridge's Bay ..	" .....	1891	1901
Linden .....	Sherbourne ..	Huntley .....	" .....	1893	1901
Lippincott .....	Nassau .....	College .....	Cedar Block.	1900	1905
Lisgar .....	Queen .....	Afton .....	Gravel .....	1897	1900
Lisgar .....	Dundas .....	Afton .....	" .....	1898	1901
Lobb .....	Shaw .....	Crawford .....	Cedar Block.	1890	1900
Logan Ave ..	Queen .....	Ashbridge's Bay ..	" .....	1889	1898
Logan Ave ..	Gerrard .....	Dundas .....	" .....	1889	1899
Lorne .....	Front .....	Esplanade .....	" .....	1899	1904
Lucas .....	Sorauren .....	Roncesvalles .....	" .....	1892	1897
Lane 1st south of King.	Church .....	218 ft. west .....	Concrete .....	1902	1907
Leonard Ave ..	Bellevue .....	Nassau .....	Brick .....	1898	1908
Lansdowne Ave.	Bloor .....	College .....	Cedar Block.	1903	1908
Lane 1st west of s. Wellington Bay .....	Wellington e Bay .....	Brick .....	Brick .....	1903	1908
Lampert .....	Crescent Rd ..	439 ft. east .....	Tar Macadam	1905	1908
McAlpine .....	Davenport ..	McMurrich .....	Cedar Block.	1891	1897
McCaull .....	Queen .....	College .....	" .....	1898	1903
McDonnell .....	Queen .....	2,826 ft. north ..	Gravel .....	1898	1901
McDonnell Sq.	Bathurst .....	Defoe .....	Macadam .....	1900	1903
McMaster Ave.	Avenue Rd ..	Rathnelly .....	Cedar Block.	1890	1900
McPherson Ave.	Rathnelly .....	Poplar Plains Rd ..	" .....	1890	1901
McPherson Ave.	Yonge .....	1,330 ft. west ..	Macadam .....	1899	1904
Manning Ave ..	Robinson .....	Queen .....	Cedar Block.	1889	1898
Manning Ave ..	Bloor .....	Hammond Pl ..	" .....	1890	1900
Manning Ave ..	Arthur .....	College .....	" .....	1900	1905
Manning Ave ..	Robinson .....	Arthur .....	" .....	1901	1906
Mansfield .....	Clinton .....	Bellwoods .....	" .....	1900	1905
Mansfield .....	Manning .....	Clinton .....	" .....	1893	1898
Mansfield .....	Bellwoods .....	Grace .....	" .....	1893	1899
Maple Grove ..	O'Hara .....	Brock .....	" .....	1899	1904
Maple .....	Glen .....	Sherbourne .....	Macadam .....	1900	1905
Marion .....	Lansdowne .....	McDonnell .....	Cedar Block.	1891	1899
Markham .....	Herrick .....	Bloor .....	" .....	1889	1898
Margueretta .....	Dundas .....	Bloor .....	" .....	1901	1906
Marion .....	Fuller .....	Sorauren .....	" .....	1901	1906
Massey .....	King .....	Queen .....	" .....	1891	1897
Maude .....	Adelaide .....	Farley .....	" .....	1887	1897
Melbourne Ave.	Cowan .....	Dufferin .....	Gravel .....	1897	1900
Melinda .....	Yonge .....	Bay .....	Asphalt .....	1891	1899
Metcalfe .....	Winchester .....	Amelia .....	Cedar Block.	1900	1905
Millstone Lane.	York .....	East end .....	" .....	1889	1899
Munns Lane .....	Wellington .....	218 ft. north .....	Asphalt .....	1893	1901
Morse .....	Queen .....	2,103 ft. southerly ..	Cedar Block.	1901	1906
Murray .....	Cær Howell .....	North end .....	" .....	1898	1903
Middleton .....	Brock .....	Sheridan .....	" .....	1892	1897

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Napier .....	Munro .....	Lane .....	Cedar Block.	1891	1896
Nassau .....	Lippincott .....	Bathurst .....	"	1899	1904
New .....	Davenport Rd..	West end .....	"	1889	1899
North .....	St. Mary .....	Bloor .....	Macadam ..	1900	1905
Northcote .....	Queen ... .....	Afton .....	Cedar Block.	1895	1900
Northumberland	Ossington .....	Preston .....	"	1893	1898
Noble .....	Queen .....	100 ft. w. Strick- land Pl.	Macadam ..	1901	1906
Nassau .....	Spadina .....	Bellevue Ave ..	Brick .....	1897	1907
Nassau .....	Bellevue .....	Lippincott .....	" .....	1898	1908
O'Hara .....	1605 ft. north of Queen.	Railway Tracks ..	Cedar Block.	1892	1897
O'Hara .....	Queen .....	1,455 ft. north ..	Gravel .....	1898	1901
Olive .....	Bathurst .....	Palmerston .....	Cedar Block.	1893	1898
Ontario Place .....	Ontario .....	270 ft. west .....	" .....	1886	1896
Ontario .....	Carlton .....	Howard .....	Asphalt .....	1890	1900
Osler .....	Royce .....	C. P. R. tracks ..	Cedar Block.	1892	1898
Ossington .....	Bloor .....	C. P. R. tracks ..	" .....	1892	1897
Ossington .....	Harrison .....	College .....	" .....	1888	1899
Ossington .....	College .....	Bloor .....	" .....	1900	1905
Oxford .....	Augusta .....	Spadina .....	" .....	1895	1900
Oxford .....	Augusta .....	Lippincott .....	" .....	1899	1905
Palmerston .....	Robinson ..	Arthur .....	" .....	1900	1905
Palmerston .....	Bloor .....	Dupont .....	" .....	1890	1899
Pape Ave .....	Queen .....	Danforth .....	" .....	1887	1897
Parliament .....	Wellesley .....	Howard .....	" .....	1888	1895
Parliament .....	Queen .....	Gerrard .....	Macadam ..	1899	1904
Parliament .....	King .....	Mill .....	" .....	1901	1906
Pearson .....	Sorauren .....	Roncesvalles .....	Cedar Block.	1901	1906
Peel .....	Gladstone .....	Dufferin .....	Gravel .....	1898	1901
Pembroke .....	Shuter .....	Wilton .....	Macadam ..	1899	1902
Pembroke .....	Wilton .....	Gerrard .....	" .....	1903	1906
Perth Ave .....	Bloor .....	Royce .....	Cedar Block.	1893	1898
Peter .....	Front .....	Wellington .....	" .....	1886	1897
Peter .....	King .....	Queen .....	" .....	1890	1900
Pinehill Road .....	Rosedale Rd..	West end .....	Macadam ..	1894	1899
Poulett .....	Sydenham .....	South term ..	Cedar Block.	1890	1896
Powell .....	Dale .....	Maple .....	Macadam ..	1901	1906
Prospect .....	Rose .....	Ontario .....	Cedar Block.	1889	1899
Pearl .....	York .....	633 feet east .....	Brick .....	1902	1907
Peter .....	King .....	Wellington .....	Cedar Block.	1903	1908
Park Road .....	Collier .....	South Drive .....	Macadam R'n	1907	19. 8
Queen .....	G. T. Ry. ....	Pape .....	Cedar Block.	1900	1905
Queen .....	Pape .....	Greenwoods .....	" .....	1900	1905
Queen .....	Gwynne .....	Roncesvalles .....	" .....	1898	1903
Queen .....	Gladstone .....	Niagara .....	" .....	1898	1903
Queen .....	Yonge .....	River .....	Asphalt .....	1894	1904

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Queen's Park Drive.	Queen's Park Cres.	Bloor .....	Macadam ...	1898	1903
Queen's Pk. Cr. Drive, e.s.	University Cres	Road running n. from Park.	"	1897	1900
Queen St. Tracks	Greenwood....	Woodbine .....	Brick .....	1902	1907
Queen .....	John .....	Bathurst .....	Asphalt .....	1898	1908
Renfrew Place	McCaull .....	East end .....	Cedar Block.	1889	1899
Richmond Place	Richmond .....	South end .....	"	1886	1896
Richmond.....	Bay .....	York .....	Macadam ..	1897	1900
Richmond.....	Victoria .....	Bay .....	Asphalt .....	1893	1901
River.....	Gerrard .....	Spruce .....	Macadam ..	1900	1905
Robinson .....	Palmerston....	Euclid .....	Cedar Block.	1886	1896
Rolyat.....	Dundas .....	Grove .....	"	1899	1904
Honeesvalles.....	Queen .....	Dundas .....	"	1890	1900
Rose Ave .....	Howard .....	Winchester .....	Asphalt .....	1892	1900
Roseberry Ave.	Bathurst .....	East end .....	Cedar Block.	1894	1899
Rossin H'se lane	York .....	East end .....	Cobble ....	1891	1897
Roxborough Ave	Yonge .....	1,328 feet w .....	Cedar Block.	1892	1897
Roxborough Ave	Yonge .....	2,180 feet e .....	"	1891	1900
Royce Ave .....	Symington Ave.	C. P. R. ....	"	1893	1898
Rush Lane .....	Esther .....	Portland .....	"	1890	1900
Rusholme Rd.	Hepbourne .....	Bloor .....	"	1890	1900
Russell .....	St. George .....	Spadina .....	"	1899	1904
Robinson .....	Palmerston .....	Euclid .....	"	1903	1908
St. Alban's.....	Yonge .....	Surrey Place .....	Macadam ..	1903	1906
St. Alban's.....	Surrey .....	Queen's Park .....	"	1898	1903
St. Clarens Ave.	Wyndham .....	Dundas .....	Cedar Block.	1889	1898
St. Clarens Ave.	Dundas .....	College .....	"	1890	1900
St. George.....	College .....	Bloor .....	Asphalt .....	1891	1901
St. James' Ave.	Ontario .....	Parliament .....	"	1892	1899
St. Joseph .....	St. Vincent .....	698½ feet w. ....	Macadam ..	1901	1906
St. Patrick .....	Bathurst .....	Denison .....	Cedar Block.	1898	1903
St. Patrick .....	Beverley .....	McCaull .....	Asphalt .....	1895	1905
St. Mary's .....	Yonge .....	W. end St. Mary's	Macadam ..	1900	1905
Sackville .....	Gerrard .....	Carlton .....	Cedar Block.	1899	1904
Sackville .....	Wellesley .....	256 feet north .....	Macadam ..	1899	1904
Sackville .....	Wellesley .....	Winchester .....	"	1899	1904
Salisbury Ave..	Sackville .....	East term .....	Cedar Block.	1886	1897
Scollard.....	Yonge .....	Hazelton .....	Cd. Bl. & B'ck in track.	1898	1903
Scott .....	Front .....	Colborne .....	Asphalt .....	1890	1900
Selby .....	Sherbourne .....	Huntley .....	Brick .....	1895	1905
Shaw.....	Arthur .....	College .....	Cedar Block.	1900	1905
Shaw.....	College .....	Bloor .....	"	1893	1898
Shaw .....	Queen .....	Defoe .....	"	1891	1901
Shaw .....	Queen .....	Arthur .....	"	1898	1903
Shaftesbury Ave	Yonge .....	1,100 feet east .....	"	1890	1899
Sussex Ave .....	Spadina .....	St. George .....	Asphalt .....	1898	1908

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Spencer Ave.	King .....	Springhurst .....	Asphalt .....	1898	1908
Sherbourne ..	Front .....	Esplanade .....	Brick .....	1903	1908
Sheridan Ave.	Florence .....	Dundas .....	" .....	1908	1908
Sumach .....	King .....	Eastern Ave .....	Tar Macad'm .....	1905	1908
Sheppard .....	Adelaide .....	Richmond .....	Macadam .....	1895	1899
Sherbourne ..	Bridge .....	South Drive .....	Asphalt .....	1891	1901
Sherbourne ..	King .....	Queen .....	" .....	1890	1899
Sherbourne ..	Queen .....	Bloor .....	" .....	1889	1899
Shirley .....	Brock .....	St. Clarens .....	Cedar Block .....	1891	1898
Shuter .....	Yonge .....	Sherbourne .....	Macadam .....	1901	1904
Simcoe .....	Front .....	Station .....	Cedar Block .....	1896	1901
Simcoe .....	King .....	Queen .....	Asphalt .....	1890	1900
South Drive .....	Crescent Rd .....	Searth Rd .....	Macadam .....	1893	1898
South Drive .....	e.s South Drive running s.	Glen Rd .....	" .....	1899	1904
Spadina .....	Front .....	King .....	" .....	1900	1905
Spadina .....	Queen .....	Adelaide .....	Cedar Block .....	1899	1904
Spadina Rd .....	Bernard .....	C.P.R. .....	" .....	1891	1901
Spruce .....	River .....	Sumach .....	Macadam .....	1899	1904
Sully .....	Arthur .....	College .....	" .....	1901	1906
Sully Cres..	Shaw .....	Sully .....	Cedar Block .....	1899	1904
Sumach .....	King .....	Eastern .....	" .....	1890	1899
Sumach .....	Gerrard .....	Wellesley .....	Macadam .....	1899	1904
Sumach .....	King .....	Gerrard .....	Cedar Block .....	1900	1905
Strickland Pl..	Noble .....	Earnbridge .....	Macadam .....	190.0	1905
Sword .....	Gerrard .....	Spruce .....	" .....	1899	1904
St. Joseph .....	Yonge .....	St. Vincent .....	Brick .....	1897	1907
St. Clarens .....	College .....	Bloor .....	Cedar Block .....	1902	1907
Temperance .....	Yonge .....	Bay .....	Macadam .....	1896	1899
Teraulay .....	Queen .....	Albert .....	" .....	1898	1903
Thompson .....	Davies .....	Munro .....	Cedar Block .....	1890	1900
Tecumseh .....	Queen .....	Walnut .....	" .....	1901	1906
Toronto .....	N. King .....	Adelaide .....	Asphalt .....	1892	1897
Trinity .....	Mill .....	King .....	Cedar Block .....	1900	1905
Tyndall Ave .....	King .....	Springhurst .....	Macadam .....	1898	1900
Turner Ave .....	Tecumseh .....	418½ ft. west .....	Brick .....	1903	1908
Ulster .....	Major .....	Bathurst .....	Cedar Block .....	1900	1905
Ulster .....	Bathurst .....	Markham .....	" .....	1894	1899
Vanauley .....	Queen .....	Grange .....	" .....	1886	1897
Vanauley .....	St. Patrick .....	St. Andrew .....	" .....	1887	1897
Victor Ave .....	Logan .....	Broadview .....	Macadam .....	1899	1904
Victoria .....	Adelaide .....	Queen .....	Asphalt .....	1895	1905
Victoria Lane .....	Queen .....	Shuter .....	Cobble .....	1890	1899
Virtue .....	Sorauren .....	East terminus .....	Cedar Block .....	1890	1900
Victoria .....	King .....	Adelaide .....	Asphalt .....	1892	1900
Vermont .....	Palmerston .....	Manning .....	Cedar Block .....	1891	1896

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Walmer Rd....	Bloor .....	Lowther .....	Cedar Block.	1897	1902
Walmer Rd ...	Lowther .....	Castle .....	"	1898	1903
Walton .....	Yonge .....	Elizabeth .....	Macadam ..	1902	1905
Wascana .....	Sumach .....	186 feet east ..	Cedar Block.	1891	1896
Washington ....	Spadina .....	Huron .....	Macadam ..	1899	1904
Wellesley Cres.	Sherbourne ..	Jarvis .....	"	1898	1901
Wellesley .....	Sumach .....	300 ft. east ..	Cedar Block.	1889	1899
Wellesley .....	Parliament ..	Sumach .....	Macadam ..	1899	1904
Wellesley .....	Sherbourne ..	Parliament ..	Asphalt ..	1894	1904
Wellington Ave.	Bathurst .....	East terminus ..	Cedar Block.	1891	1901
Wellington ....	Church .....	Yonge .....	Asphalt ..	1889	1899
Wellington ....	Bay .....	York .....	" ..	1891	1899
West Lodge....	Merrion Pl ..	1,146 ft. north ..	Cedar Block.	1899	1904
Westmoreland ..	Durham .....	Union .....	"	1890	1900
Westmoreland ..	Bloor .....	Durham .....	"	1890	1900
Wilkins .....	King .....	North terminus ..	"	1888	1899
Winchester .....	Parliament ..	Sumach .....	Asphalt ..	1893	1901
Withrow Ave ..	Broadview ..	1,060 ft. east ..	Cedar Block.	1889	1898
Wilton .....	Sherbourne ..	Parliament .....	Macadam ..	1901	1906
Wolsely .....	Esther .....	Bathurst .....	Tar Macadam	1900	1905
Wolfrey .....	Broadview ..	Bowden .....	Cedar Block.	1888	1899
Wright Ave ...	McDonnell ..	Sorauren .....	"	1891	1899
Wardell .....	DeGrassi ..	South Ave .....	"	1902	1907
Wyndham .....	Brook .....	St. Clarens .....	"	1902	1907
Wilcox.....	St. George ..	Robert .....	Asphalt .....	1898	1908
Yonge .....	Grenville ..	Bloor .....	" ..	1892	1902
Yonge .....	King .....	Hayter .....	" ..	1892	1902
Yonge .....	Hayter .....	Grenville .....	" ..	1892	1902
Yorkville .....	Yonge .....	Avenue Rd .....	Cedar Block.	1896	1901
York .....	Pearl .....	Adelaide .....	Brick .....	1902	1907
York .....	Queen .....	Adelaide .....	" ..	1902	1907
York .....	King .....	Front .....	Asphalt .....	1898	1903
Yonge .....	Bloor .....	Davenport .....	" ..	1898	1908
York St. Bridge.	.....	.....	Sq. Pine Bl'k Pavement.	1903	1908

## BITULITHIC PAVEMENTS.

During the year there was constructed a total mileage of 5.326 miles of bitulithic pavement. This is an increase of 0.978 miles over the amount laid in 1907. The total yardage laid was 80,539 square yards.

In conjunction with bitulithic pavements, there was constructed during the year 23,333 lineal feet of concrete curbing and gutter.

Details of bitulithic pavements are to be found in Table No. 7.

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#### MACADAM ROADWAYS.

There were constructed during the year 3 new macadam roadways, all of which were short, and 2 reconstructions. These five roadways have a mileage of 0.973 miles, representing 12,317 square yards. As the mileage for 1907 was 1.434 miles, an appreciable decrease in this class of pavement is apparent.

It is interesting to note the decrease in macadam roadways constructed from year to year, and when it is considered that at the same time a number of worn-out macadams are being torn up and replaced with pavements of a permanent character, it is quite evident that these dirty and unsatisfactory roads are being eliminated.

In conjunction with macadam roadways 695 lineal feet of concrete curbing was placed.

Tables No. 7 and 8 show details.

#### CONCRETE PAVEMENTS.

During the year 8 concrete pavements were constructed, representing a mileage of 0.553 miles, which is 0.105 miles in excess of the amount laid the previous year.

In all but one instance these pavements were laid on lanes, and the remaining one on a street which was but lightly travelled.

This class of pavement has given excellent satisfaction for lightly travelled thoroughfares, being permanent and readily cleaned.

The first cost is also considerably less than that of any other permanent pavement, with the possible exception of asphalt.

2,724 lineal feet of concrete curbing was laid in conjunction with concrete pavements during the year.

Tables No. 7 and 8 give details.

#### CONCRETE SIDEWALKS.

A total of 496 concrete sidewalks were constructed during the year, 430 of which were constructed under the Local Improvement System, the remaining 66 being put down by private contract under the supervision of this Department. The total mileage laid was 55.101 miles, which is a decrease of 3.208 miles when compared with the mileage laid during 1906.

## RECORD OF CEMENT TESTS, from July 1st, 1907, to July 1st, 1908.

Brand.	No. of Samples Tested.	No. of Samples Rejected.*	Soundness, Fujii Test.	Specific Gravity.	Fineness, Residue on Sieves.	Setting in Minutes.	Percentage of Water Used in Mixing.	Tensile Strength in Pounds per Square Inch.						Remarks.							
								Neat.	3 to 1.	24 Hours.	7 Days.	28 Days.	3 Months.	1 Year.							
Belleville . . . . .	16	0	O.K.	3.138	2.8	6.9	20.1	137	402	20.4	10.0	334	621	696	102	256	380	Canadian.			
Colonial . . . . .	22	0	O.K.	3.120	2.5	7.0	21.0	155	428	21.0	10.0	296	701	717	803	746	82	261	330	385	395
Hercules . . . . .	9	0	O.K.	3.152	3.0	8.0	22.5	188	421	20.0	10.0	244	629	773	..	78	250	311	..	..	..
Imperial . . . . .	16	1	6.4% failed	3.162	1.4	4.8	19.6	186	403	20.2	10.0	300	589	679	690	..	87	242	300	298	..
International . . . . .	21	0	O.K.	3.145	1.5	5.0	18.9	123	425	20.5	10.0	348	606	653	..	91	270	375	..	..	..
Maple Leaf . . . . .	4	0	O.K.	3.132	1.3	5.1	19.0	184	436	20.0	10.0	215	578	697	792	607	88	276	352	465	349
Mونich . . . . .	180	0	O.K.	3.169	2.5	6.2	19.7	106	396	20.4	10.0	337	588	675	709	640	108	297	389	549	400
National . . . . .	197	0	O.K.	3.165	2.1	6.6	21.2	172	419	20.0	10.0	222	584	729	892	744	80	236	336	428	416
Samson . . . . .	8	0	O.K.	3.174	1.3	4.9	19.4	181	124	21.5	10.0	339	639	739	..	99	276	377	..	..	..
Saugeen . . . . .	14	2	O.K.	3.134	0.4	5.5	19.7	170	349	20.5	10.0	339	632	691	580	520	96	294	346	336	316
Star . . . . .	168	3	O.K.	3.136	3.1	7.6	22.3	164	428	21.0	10.0	309	515	594	647	103	239	334	380	385	
Sun . . . . .	4	0	O.K.	3.127	0.9	4.3	18.0	205	434	21.0	10.0	310	689	766	..	123	285	353	..	..	..
Superior . . . . .	2	0	O.K.	3.150	2.2	4.2	13.1	228	420	20.5	10.0	268	594	644	..	93	218	270	..	..	..
	622	6																			

\*Some of the samples rejected were held over and when sufficiently aged were allowed to be used.



The length of the guaranteed period on concrete walks was reduced this year from 5 years to 18 months. The result of this change is that more contractors tendered on sidewalks this season than formerly. The tendered prices also dropped considerably.

The total length of concrete walks in the City is now 340.919 miles

In connection with concrete sidewalks 119,064 lineal feet of concrete curbing was laid during the year.

#### PLANK SIDEWALKS.

The following is a list of the plank sidewalks constructed as Local Improvements during 1908:

Street.	Side.	From.	To.	Length.	Width	Cost.
						\$ c.
Eastern Ave ..	South.	400 ft. west of Morley .....	Knox .....	904 feet 4 feet		434 86
Hunter .. . . .	South.	Jones .. . . .	Leslie .. . . .	640 feet 4 feet		300 73
Lenty Ave....	West.	1101 ft. south of Violet .. . . .				
Lee Ave.....	East..	Violet Ave....	450 ft. fur. s. . .	450 feet 4 feet		204 29
O'Connell Ave.	South.	Brock Ave....	South end . . . .	583 feet 4 feet		230 85
Shaw Place....	South.	Shaw St .. . . .	East end . . . .	265 feet 4 feet		97 42
			144 ft. 6 in. e. of	489 feet $5\frac{1}{2}$ feet		339 44
Shaw Place....	South.	Ossington .. . . .	Ossington. . . . .			
Violet Ave ...	South.	Lee Ave . . . . .	144 ft. 6 in. e. 144 $\frac{1}{2}$ feet	$5\frac{1}{2}$ feet		100 94
Walnut Ave ..	West .	Queen St . . . . .	Leuty .. . . . .	355 feet 4 feet		140 46
			Clifford. . . . .	342 feet 4 feet		120 82

#### DAY LABOR WORKS.

During the year 1908, 430 concrete and 2<sup>1</sup> brick sidewalks were constructed, of which 75 concrete walks and the 2 brick walks were done by day labor. Of these 14 were ordered by Council to be done by day labor without the formality of calling for tenders, and the rest, 63 in number, were awarded to the City Engineer, he being the lowest tenderer. On 32 other walks the City Engineer's tender was found to be the lowest, but at the request of the next lowest tenderer, he was allowed to do the work under the supervision of this Department, and at the City Engineer's figures, thus effecting a substantial saving to the property owners. The walks constructed under this system aggregated 7 $\frac{1}{2}$  miles, as compared with 10 $\frac{1}{2}$  miles in 1907.

In estimating the gain or loss resulting from the day labor system, if we take the lowest contractor's tender as a basis of comparison on the walks for which tenders were invited, we find an actual gain of \$4,524.07 on an actual expenditure of \$34,452.42.

The total cost of sidewalks constructed under the day labor system during 1908, exclusive of interest on the money, etc., was \$34,452.42, as compared with \$57,608.77 in 1907.

The total cost of sidewalks done by order of Council was \$6,021.70 as against an estimated cost of \$8,228.

Table No. 10 gives widths, amount of City's tender, next lowest tender, actual cost of the work, and loss and gain in comparison with contractors' tenders.

During the year we were awarded contracts by tender for the construction of 19 asphalt pavements, 3 macadam pavements, 3 asphalt block pavements, 9 vitrified block pavements on concrete, 4 brick pavements on concrete, 2 concrete pavements, 16 concrete curbs and 1 grading.

In addition to the above, 2 macadam pavements, 1 cedar block pavement on concrete, 1 track allowance pavement, 1 curb and 1 grading were done by order of Council.

On these works a net gain of \$25,380.80 was effected on an actual expenditure of \$134,414.84. (See Table No. 11.)

The total cost of roadway work done by order of Council was \$23,936.12, as against an estimated cost of \$32,582.

Table No. 14 gives details of curb contracts completed during 1908.

Total cost of Local Improvement pavement work done was \$121,-329.84.

The total expenditure of this Department for Local Improvement and track allowance work was \$168,867.26.

A reference to Tables Nos. 10 and 11 will show a saving in favor of property abutting on streets on which sidewalks were constructed by day labor during 1908 of \$5,123.86, and a saving of \$25,380.80 due to the construction of pavements. In addition, credit is claimed for a saving of \$2,896 on 32 sidewalks, 15 pavements, and 66 curb contracts.

Refined Asphalt.



Street.	From.	To.	Contractor.	Temperature of Surface Mixture.				Physical Properties.			
				Max. ° F.	Min. ° F.	Min. Min. P.	Max. Max. P.	Penetration in Surface Mixture.	Penetration (Dow's Method)	Density of Asphaltic Mixture.	Specific Gravity.
Aberdeen Ave.	Parliament St.	441 ft. west.....	Constg & Pav. Co .....	Bermudez .....	10.70	40	230	203	1.0	1.0	1.0
Admiral Road.....	18 ft. s. of n.s. Ber-	".....	".....	Californian .....	10.89	61	330	193	1.0	1.0	1.0
Admiral Road.....	nard.	".....	".....	Bermudez .....	10.37	42	320	228	1.0	1.0	1.0
Armstrong Ave.	Dufferin St.....	".....	Godson Con. Co.....	Texan .....	11.22	30	360	290	1.0	1.0	1.0
Ann St .....	Yonge .....	".....	".....	Californian .....	9.16	47	330	176	1.0	1.0	1.0
Barton Ave.....	Bathurst St.....	".....	City Engineer .....	Californian .....	9.46	47	300	260	1.0	1.0	1.0
Barton Ave.....	Parkhurst Ave.....	".....	".....	Texan .....	11.20	62	310	240	1.0	1.0	1.0
Brock Ave.....	Bloor St.....	".....	".....	Californian .....	11.30	60	300	245	1.0	1.0	1.0
Berkley St .....	Queen St.....	".....	".....	Texan .....	10.42	44	300	250	1.0	1.0	1.0
Brunswick Ave.	College St.....	120 ft. north.....	City Engineer .....	Bermudez .....	9.65	63	300	250	1.0	1.0	1.0
Barton Ave .....	Christie St.....	Constg & Pav. Co .....	".....	Californian .....	9.35	30	321	275	1.0	1.0	1.0
+Barton Ave .....	Parkhurst Ave.....	".....	".....	Californian .....	9.92	59	325	221	1.0	1.0	1.0
Bolton Ave .....	Gerrard St.....	Warren Bit, Pav. Go .....	".....	Bermudez .....	9.81	30	300	250	1.0	1.0	1.0
Broadview Ave .....	Queen St.....	Constg & Pav. Co .....	".....	Californian .....	8.93	40	328	246	1.0	1.0	1.0
+Bloor St .....	Eastern Ave.....	".....	".....	Bermudez .....	10.08	63	310	256	1.0	1.0	1.0
Dufferin St .....	Lansdowne Ave.....	".....	".....	Texan .....	10.63	30	320	220	1.0	1.0	1.0
Clinton St .....	Dufferin St.....	".....	".....	Californian .....	11.14	30	350	250	1.0	1.0	1.0
Clinton St .....	Barton Ave.....	".....	".....	Texan .....	10.33	30	350	240	1.0	1.0	1.0
Conduit St .....	Dundas St.....	West City Limits .....	".....	Californian .....	11.09	43	306	240	1.0	1.0	1.0
Carling Ave.....	Ossington Ave.....	".....	".....	Texan .....	10.27	40	340	260	1.0	1.0	1.0
Dawson St .....	Crawford St.....	North end .....	".....	Californian .....	10.66	40	310	240	1.0	1.0	1.0
College St .....	Sorareen Ave.....	".....	".....	Californian .....	9.48	49	320	256	1.0	1.0	1.0
Carling Ave.....	Bloor St.....	Thorne .....	".....	Californian .....	9.08	30	320	250	1.0	1.0	1.0
Duchess St .....	Sherbourne St .....	".....	".....	Texan .....	11.80	60	330	240	1.0	1.0	1.0
Dundas St .....	Parliament St .....	".....	".....	Californian .....	10.46	60	330	240	1.0	1.0	1.0
Dundas St .....	Ossington Ave.....	".....	".....	Trinidad Pitch Lake .....	11.60	47	312	256	1.0	1.0	1.0
Essex St .....	Christie St.....	".....	".....	Californian .....	10.08	39	335	252	1.0	1.0	1.0
Eastern Ave .....	Carlaw Ave.....	Barber Asph. Pav. Co .....	".....	Bermudez .....	9.93	33	310	260	1.0	1.0	1.0
Emerson Cres .....	Orsonburg Ave.....	Constg & Pav. Co .....	".....	Trinidad Pitch Lake .....	10.01	30	380	260	1.0	1.0	1.0
Emerson Ave .....	Dunn Ave.....	Barber Asph. Pav. Go .....	".....	Californian .....	9.38	49	320	250	1.0	1.0	1.0
Duchess St .....	Bloor St.....	Constg & Pav. Co .....	".....	Trinidad Pitch Lake .....	10.27	61	320	250	1.0	1.0	1.0
Evans Ave .....	Jarvis St .....	Barber Asph. Pav. Co .....	".....	Californian .....	10.43	47	315	245	1.0	1.0	1.0
Evans Ave .....	King St .....	Leslie St .....	".....	Texan .....	10.35	68	290	240	1.0	1.0	1.0
Euclid Ave .....	Clinton St .....	Wellington St .....	".....	Trinidad Pitch Lake .....	11.46	62	320	280	1.0	1.0	1.0
Franklin Ave .....	Pape Ave .....	Carlaw Ave .....	Barber Asph. Pav. Co .....	Californian .....	10.30	45	350	260	1.0	1.0	1.0
Franklin Ave .....	Dundas St .....	Carlaw Ave .....	Constg & Pav. Co .....	Texan .....	11.00	34	310	260	1.0	1.0	1.0
Franklin Ave .....	Euclid Ave .....	Sheldan Ave .....	City Engineer .....	Californian .....	10.50	60	325	240	1.0	1.0	1.0
Gladstone Ave .....	Roskin Ave .....	Linday Ave .....	Constg & Pav. Co .....	Bermudez .....	9.61	33	300	270	1.0	1.0	1.0
Galley Ave .....	Gladstone Ave .....	Soranure Ave .....	City Engineer .....	Californian .....	10.47	40	340	260	1.0	1.0	1.0
Grafey St .....	Ronewells Ave .....	Soranure Ave .....	Constg & Pav. Co .....	".....	9.18	22	340	280	1.0	1.0	1.0
Gore St .....	Ronewells Ave .....	Soranure Ave .....	".....	Californian .....	10.40	22	330	240	1.0	1.0	1.0
Grafey St .....	Clinton St .....	West end .....	City Engineer .....	Californian .....	10.20	36	340	270	1.0	1.0	1.0
Grafey St .....	Logan Ave .....	700 ft. east .....	Godson Con. Co .....	Bermudez .....	10.85	26	320	260	1.0	1.0	1.0
Grace St .....	744 ft. n. Palmerston Avn .....	Collego 150 ft. further north	Constg & Pav. Co .....	Bermudez .....	10.37	61	300	264	1.0	1.0	1.0
Grafey St .....	Parliament St .....	River St .....	Godson Con. Co .....	Texan .....	10.36	38	244	290	1.0	1.0	1.0
Golden Ave .....	Dundas St .....	North end .....	Constg & Pav. Co .....	Bermudez .....	11.24	33	318	243	1.0	1.0	1.0
Gould St .....	Victoria St .....	Mutual St .....	Godson Con. Co .....	Texan .....	10.20	40	310	240	1.0	1.0	1.0
Grace St .....	1,494 ft. n. Collego 250 ft. further north	Clinton St .....	Constg & Pav. Co .....	Godson Con. Co .....	10.37	61	300	264	1.0	1.0	1.0
Harland St .....	Spadina Avn .....	Huron St .....	".....	Texan .....	11.68	27	360	240	1.0	1.0	1.0
Howard Park .....	Dundas St .....	Van Horne St .....	Godson Con. Co .....	Californian .....	10.78	38	350	270	1.0	1.0	1.0
Jerome St .....	Kintyre Ave .....	Gerald St .....	Constg & Pav. Co .....	Bermudez .....	9.13	41	323	242	1.0	1.0	1.0
Hamilton St .....	Queen St .....	Kinsey St .....	Godson Con. Co .....	Californian .....	9.13	41	323	292	1.0	1.0	1.0
Hamilton St .....	Queens St .....	Collego St .....	Constg & Pav. Co .....	Bermudez .....	9.66	67	320	240	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Blair St .....	Constg & Pav. Co .....	Bermudez .....	10.09	43	320	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Clinton St .....	Godson Con. Co .....	Texan .....	10.86	34	290	240	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Californian .....	9.00	23	284	240	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Californian .....	9.84	31	330	240	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	10.00	43	320	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	10.17	67	340	280	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Trinidad Pitch Lake .....	11.40	40	300	260	1.0	1.0	1.0
Hawlock .....	Bloor St .....	Huron St .....	".....	Bermudez .....	11.40	40	300	260	1.0	1.0	1.0

The Construction and Laying used a km

where the City Engineer's tender was lowest, and which were accepted by the contractor at his figures, said saving being the difference between the City Engineer's tender and the contractor's original tender.

The total saving, therefore, that can be credited to the day labor system is \$32,800.87.

In addition to this saving, the Department is also entitled to the saving on the cost of inspection, which is always incurred on contract work, but is rendered unnecessary on day labor works. Estimated at \$3.50 per day for the actual time the work was in progress, this saving would amount to \$2,346.

On referring to the various tables in connection with day labor works and comparing them with those of other years, it will be found that this branch of the Engineer's Department is steadily increasing its business, notwithstanding the fact that there are more contractors doing street work in Toronto this year than ever before.

There were 6 foremen employed throughout the year on day labor works, giving work to about 125 men.

#### MAINTENANCE DEPARTMENT.

Following is a statement in brief of the work carried out by the maintenance branch of the Roadways Department, for the past year:

##### MACADAM ROADWAYS.

The undermentioned macadam roadways which were constructed as local improvements have been resurfaced at the costs given below. These roadways are now in a creditable condition. However, there are a number of old macadam roads throughout the City, which are in such condition that would not warrant resurfacing; these roads have been repaired from time to time as the occasion demanded.

The cost of the work done on pavements that have been resurfaced is as follows:

Cherry Street, Eastern Avenue to G. T. R. tracks.....	\$420 19
Cypress Street, Eastern to Front .....	118 61
Front Street, Trinity to Cherry .....	240 11
Sumach Street, Gerrard to Carlton .....	599 48
Glen Road, Dale to Elm .....	691 50
Crescent Road, Park Road to South Drive.....	684 25

South Drive, Scarth to Glen .....	592	38
River Street, Gerrard to Queen .....	1,070	42
Eastern Avenue, Trinity to Don .....	492	09
Wellesley Crescent, Jarvis to Sherbourne .....	717	82
Spruce Street, Sumach to River .....	302	16
Suffolk Place, Homewood to west end .....	123	52
Maitland Place, Homewood to west end .....	152	52
Queen's Park Avenue, Queen to Caer Howell .....	2,119	49
Ossington Avenue, Bloor to C. P. R. ....	1,522	89
Den Esplanade, King to Eastern .....	1,298	28
Grenville Street, Yonge to Queen's Park .....	705	96
Isabella Street, Jarvis to Sherbourne .....	364	70
<hr/>		
	\$12,216	37

Queen's Park Avenue, Queen to Caer Howell, was treated with Tarvia, at a cost of about ten cents per square yard, over and above the ordinary cost of a 4-inch granite resurfacing. The resulting pavement is apparently quite satisfactory for light traffic, as it is smooth and comparatively free from dust.

The undermentioned is a list of those macadam roads which were repaired and patched to keep in a safe state for traffic, but did not warrant resurfacing:

Agnes Street, Armory Street, Balmuto Street, Bay Street, Bellair Street, Bond Street, Breadalbane Street, Centre Avenue, Chapel Street, Charles Street West, Charles Street East, Chestnut Park Road, Christopher Street, Cluny Avenue, Cottingham Street, Crescent Road, Cumberland Street, Dalhousie Street, Davenport Road, Edward Street, Elizabeth Street, Elm Street, Front Street, Gerrard Street East, Gloucester Street, Grosvenor Street, Irwin Avenue, Isabella Street, Lake Street, Macpherson Avenue, Maitland Street, Mutual Street, North Street, Queen's Park, e.s., Richmond Street, St. Alban's Street St. Joseph Street, St. Mary Street, St. Nicholas Street, St. Thomas Street, St. Vincent Street, Sheppard Street, Shuter Street, Surrey Place, Temperance Street, Terauley Street, Trinity Square, University Street, Walton Street, Wellesley Street, Yonge Street, York Street, York Street Bridge, Davenport Road, Crescent Road, Temperance Street, Davenport Road, Huron Street, Washington Avenue, Beverley Street, Grange Road, Larch Street, Denison Avenue, Wellington Street West, Poplar Plains Road, Foxley Street, Wellington Avenue, Montrose Avenue, Stafford Street, S. McDonnel Square, Claremont Street, Kingston Road, DeGrassi Street, Logan Avenue, First Avenue, Lang-

ley Avenue, Riverdale Avenue, Eastern Avenue, Brock Avenue, Lansdowne Avenue, Tyndall Avenue, Elgin Avenue, Harbord Street, Division Street, Caer Howell Street, Grange Avenue, John Street, Spadina Avenue, Front Street, Dovercourt Road, Strachan Avenue, Cinder Avenue, Givens Street, Atlantic Avenue, Robinson Street, Palmerston Avenue, Queen Street East, Munro Street, McGee Street, Elliott Street, Victor Avenue, Don Improvement Roadway, Atlantic Avenue, Dufferin Street, Lakeshore Road, Scarth Road, Nanton Avenue, Hurst Place, Wellesley Street, Oak Street, Wilton Avenue, Front Street, Cherry Street, Jarvis Street, George Street.

#### GENERAL ROAD REPAIRS.

The different classes of pavements throughout the City, such as stone, brick, cedar block, asphalt, gravel, macadam and unpaved streets, etc., etc., have all received attention from time to time, to keep them in a fit state for traffic.

#### GRADING.

The following streets were graded and turnpiked at the costs stated:

Albemarle Avenue, Logan to west end .....	\$747 14
Major Street, Bloor to Lowther .....	54 25
Castle Avenue, Walmer to Kendal .....	81 60
Dufferin Street, G. T. R. to Dominion Street .....	30 59
Indian Road, Lake Shore Road to High Park Boulevard .....	81 72
Geoffrey Street, Roncesvalles to Sunnyside .....	81 75
Eastern Avenue, G. T. R. to Queen .....	312 26
Harcourt Avenue, Pape to Carlaw .....	23 61
Hastings, Queen to North .....	73 36
Rowanwood Avenue, a point east of Yonge to Scarth .....	120 55
Marmaduke Street, Roncesvalles to Sunnyside .....	51 08
Highland Avenue, Schofield to West .....	44 50
Scarth Road, Chestnut Park to North .....	328 86
Hogarth Avenue, (Blvd.) Broadview easterly .....	31 75
Russell Hill Drive, Poplar Plains to St. Clair .....	116 50
Emerson Avenue, 495 feet north, Wallace to Lappin .....	129 40
Hickson Avenue, St. Clarens to Norfolk Place.....	19 64
Kippendavie Avenue, Queen to south end .....	30 15
Kenilworth Avenue, Queen to south end .....	164 33
Queen Street, opposite Woodbine Race Course .....	52 30
Brown Street, Paton Road to south end .....	30 50
Janet Street, Brown to Lansdowne .....	16 75
Millicent Street, Emerson to Dufferin .....	31 25

Dominion Street, Dufferin to west end .....	77 50
Carlaw Avenue, Eastern Avenue south .....	18 55
High Park Boulevard, Roncesvalles to Park .....	49 11
Heath Street, Avenue Road to a point east of Oriole .....	26 95
Forrest Hill Road, St. Clair to Lonsdale .....	28 44
North Markham Street, Olive to Vermont .....	36 00
Oriole Road, St. Clair to Lonsdale .....	116 12
St. Clair Avenue, Avenue Road to Warren Road .....	113 22
Schofield Avenue, Binscarth to Edgar .....	18 00
Lonsdale Avenue, east and west from Avenue Road .....	93 00
Clarendon Avenue, Poplar Plains to Russill Hill .....	49 39
Balmoral Avenue, Poplar Plains to Russill Hill .....	46 50
Galley Avenue, Roncesvalles to Sunnyside .....	33 87
Glen Road, Bridge to Pelham .....	204 89

#### NEW STREETS—OPENED AND EXTENDED.

The following streets have been opened or extended during 1908:

- Whytock St., from Lansdowne Ave to St. Helen's Ave.
- Woodlawn Ave., from Woodland Ave. to Farnham Ave.
- Shaw Place, from Ossington easterly (widening).
- Armstrong Ave., from west end to Emerson Ave.
- Radford Ave., from west end to Indian Rd.

#### SIDEWALK EXTENSIONS.

At the request of property owners and others, sidewalk extensions and private crossings have been constructed by the Department, for which there has been received and paid to the City Treasurer the sum of \$640.26.

The amount received on miscellaneous accounts and paid to the City Treasurer was \$536.91.

#### STREET OPENING PERMITS.

The number of permits issued to builders, excavators and others who were desirous of temporarily removing portions of sidewalks, was six. In each case a deposit was exacted as a guarantee that the sidewalk would be properly restored. The total amount of these deposits received and paid to the City Treasurer was \$42.

#### STREET NUMBERING.

During the past year a very large number of new houses have been erected, necessitating the placing of a correspondingly large number of

house numbers. The number of figures used for this purpose, together with the re-numbering of certain streets, was 8,056. There have also been erected at street intersections throughout the City 1,486 enamelled street signs.

The amount that Council saw fit to appropriate for this service, viz., \$2,000, was not sufficient to carry out all the renumbering necessary.

The following streets have been renumbered during the past year:

Hamburg Avenue (now Gladstone Avenue), Ivy Avenue, Spadina Crescent, Hastings Avenue, Macpherson Avenue, Belmont Street, Boulbee Avenue, Catherine Street (now Richmond Street), Turner Avenue (now Stanley), Plymouth Place, Blackburn Street, and twenty-one other streets have been renumbered in part.

#### TRACK ALLOWANCE REPAIRS.

This branch of maintenance work is being pushed along as rapidly as possible, as the track allowances throughout the City have been in a bad state of repair. Table No. 13 will give details of work done during 1908.

A vast improvement is now visible on a great many streets, but it will still take a lot of work to get all these pavements in a good state of repair. The work is costly and slow owing to the fact that there can be no interruption to street car traffic while it is in progress.

TABLE No. 13.  
REPAIRS TO TRACK ALLOWANCES, 1908.

Street.	Class.	Amount.
		\$ . c.
Arthur Street.....	Repair.....	796 46
Avenue Road.....	" .....	327 06
Bathurst Street.....	" .....	58 61
Bloor Street W.....	" .....	1,055 59
Bloor Street E.....	" .....	13,085 25
Bloor, Dufferin, Lansdowne.....	New track allow. reconstruction..	188 52
Broadview Avenue .....	Repair.....	434 03
Carlton Street .....	" .....	785 85
Church Street .....	" .....	37 04
Church St. and inters'n of Queen	" .....	334 93
College Street .....	Reconstruction .....	10,953 51

Street.	Class.	Amount.
		\$      c.
College St. and inters'n of Yonge	Reconstruction .....	3,522 93
Dovercourt Road .....	Repair .....	16 16
Dupont Street .....	Reconstruction .....	4,935 45
Dufferin Street .....	Repair .....	536 23
Dundas Street .....	" .....	7,449 33
Exhibition Loop .....	New track reconstruction .....	969 67
Front Street W .....	Repair .....	6,363 89
Front Street E .....	Reconstruction .....	2,904 68
Gerrard Street .....	Repair .....	634 46
Howard Park Avenue .....	" .....	1,186 22
King Street E .....	" .....	1,911 33
King Street W .....	Reconstruction .....	17,932 02
Lansdowne Avenue .....	Repair .....	916 91
McCaul Street .....	" .....	1 97
Ossington Avenue .....	" .....	115 12
Parliament Street .....	" .....	334 56
Queen Street W .....	Reconstruction .....	13,548 08
Queen Street E .....	" .....	38,065 30
Richmond Street intersections of		
Victoria and Church .....	New track .....	4,171 04
Rosedale Loop .....	" .....	3,504 01
Roncesvalles Avenue .....	Repair .....	284 27
Scollard Street .....	" .....	468 20
Sunnyside Loop .....	New track reconstruction .....	7,047 66
Sherbourne Street .....	Repair .....	3,135 63
Spadina Avenue .....	Reconstruction .....	5,766 55
Station Street .....	Repair .....	162 74
Winchester Street .....	" .....	1 44
York Street .....	" .....	1,025 73
Yorkville Avenue .....	" .....	15 57
Yonge Street .....	" .....	7,213 81
		162,197 81
New pavement (completion) G.B. & T.A., Gerrard, Leslie and Greenwood .....	.....	4,889 06
		167,086 87

## WOODEN CROSSINGS.

The wood crossings throughout the City have received careful attention to maintain them in a safe state for traffic.

During the past year ten (10) new wood crossings were constructed by this Department as against 57 for the year 1907, and 118 for the year 1906.

## PERMANENT CROSSINGS.

Sixty-eight permanent crossings were constructed during the past year, as against 103 laid during the preceding year. These crossings

were built of scoria, stone, and brick, and constitute a clean and durable class of crossing.

#### LAKE SHORE ROAD RETAINING WALL.

In the early part of the past year Lake Ontario was swept by a series of extremely violent storms, which, in conjunction with the high water, battered down the dry rubble wall along the Lake Shore Road, and washed out large portions of the roadway and sidewalk. This seriously impeded traffic, and operations were commenced to restore the damaged portions of the wall and road.

The wall was rebuilt more strongly than before for a length of 2,864 feet east of the Humber River, besides which 212 lineal feet of cribbing was placed at the east end of the road. These works were backfilled with heavy material, 5,763 cubic yards of brick bats, stone, etc., being used. The total cost of this portion of repairs was \$6,120.66. Having completed the wall, it was then necessary to renew the road and sidewalk, and accordingly 15,742 square yards of macadam was placed, at a cost of \$9,489.68.

The walk from Sunnyside to Windermere Avenue was reconstructed, new plank being laid as far west as the west entrance to High Park, and old plank from the west entrance to Windermere. The hand railing was also renewed where necessary.

The total cost of this walk was \$1,810.09.

#### ISLAND WALKS.

In the early part of the past year the series of heavy storms experienced and the unusually high water following, washed out large portions of the Lake Shore plank walk, and inundated several streets and considerable private property.

From Clandeboye Avenue to Chippewa Avenue on the Lake Shore, the walk was so damaged that a new walk was found necessary. This walk was built on piers consisting of large heavy boxes filled with gravel and sand.

It was also necessary to replace the walk on Clandeboye Avenue for a length of 600 feet. The total cost of these works was \$1,933.62.

In addition to this, 1,045 feet of 6-ft. plank walk was constructed on the new roadway opened easterly from Chippewa Avenue at a cost of \$1,559.57.

## HOUSE OF INDUSTRY STONE.

During the season 1907-8, the casual inmates of the House of Industry broke 1,565 cubic yards of stone, as against 1,586 cubic yards for a like period during the preceding year.

## SNOW CLEANING REPORT.

1907-1908.

Ward No.	Division.	Amount Cleaned.		Cost.
		Miles.	Feet.	
1.....	1	19	756	\$ 444 77
	2	45	2,961	1,058 55
	1a	1	4,127	41 38
	1b	1	2,721	35 22
	2	24	1,200	562 87
	1a	5	3,011	129 50
	1b	1	4,163	41 51
	2	3	710	72 81
	3	11	894	259 58
	4.....	1	2,554	127 35
4.....	2	8	2,378	195 81
	3	32	2,123	752 77
	5.....	1	2,954	175 61
5.....	2	48	3,384	1,129 93
	3	33	947	770 76
	6.....	1	2,009	1,472 46
6.....	2	49	4,944	1,160 13
	3	45	4,063	1,063 31
		408	3,659	9,494 32

## SNOW CLEANING—SIDEWALKS.

During the winter 1907-8 the snow was removed from 2,157,899 lineal feet of sidewalks, as against 1,752,960 lineal feet during the winter of 1906-7, and 473,102 lineal feet during the winter of 1905-6.

The cost of this work, \$9,494.32, was assessed against the properties fronting on the walks cleaned, the rate being 4 4-10 mills per foot for each removal. This rate is higher by 1 4-10 mills than the rate for the winter of 1906-7.

## STAFF.

During the year thirteen foremen were constantly at work on various kinds of repairs, giving employment to about 200 men.

In addition to this staff there were six district foremen looking after maintenance work and minor repairs necessary to keep the roadways and sidewalks in a safe and satisfactory condition.

Respectfully submitted,

M. A. STEWART,  
*Assistant Engineer.*

TABLE No. 7.  
ASPHALT PAVEMENTS—1908-09.

Street.	From.	To.	Width Lin. ft.	Length Lin. ft.
*Aberdeen { surface put on '08	Parliament.....	441 ft. west .....	18	441
Admiral .....	21 ft. s. of n.s. Bernard	18 ft. w. of e.s. St. George	24	965
Armstrong .....	Dufferin .....	West end .....	24	1,271
Ann .....	Mutual .....	Yonge .....	21	1,292
Barton .....	Bathurst .....	Markham .....	24	266
Barton .....	Palmerston .....	Manning .....	24	530
Brock .....	Bloor .....	North end .....	24	990
Berkeley .....	Queen .....	Duke .....	24	827
Brunswick .....	College .....	120 ft. north .....	16 $\frac{7}{12}$ -16 $\frac{3}{4}$	110
Barton .....	Christie .....	Manning .....	24	559
Barton .....	Palmerston .....	Markham .....	24	266
Bolton .....	Queen .....	Gerrard .....	24	2,435
Broadview .....	Queen .....	Eastern .....	24	945
Bloor .....	Dufferin .....	Lansdowne .....	26	1,956
Clinton .....	Barton, s.s. ....	Yarmouth .....	20	1,298
Clinton .....	Bloor .....	Barton .....	20-24	1,075
Conduit .....	Dundas .....	West City Limits .....	24	750
College .....	Sorauren .....	Roncesvalles .....	24	1,358
Crawford .....	Bloor .....	Thorne .....	24	1,023
Carling .....	Bloor .....	North end .....	20	311
Dewson .....	Ossington .....	Havelock .....	24	1,674
Duke .....	Sherbourne .....	Parliament .....	28	1,362
Delaware .....	Dewson .....	Bloor .....	24	1,763
Duchess .....	Jarvis .....	Sherbourne .....	30	885
Duchess .....	Sherbourne .....	Parliament .....	24	1,292
Dingwall .....	Pape .....	Carlaw .....	24	582
Dundas .....	Ossington .....	Lansdowne .....	28	4,956
Essex .....	Christie .....	Shaw .....	24	1,311
Eastern .....	Morse .....	Carlaw .....	24	275
Empress Cres. ....	Jameson .....	Dunn .....	24	769
Emerson .....	Bloor .....	Wallace .....	24	1,454
Endean .....	Jones .....	Leslie .....	24	641
Emily .....	King .....	Wellington .....	21	436
Evans .....	Clinton .....	West end .....	18	272
Euclid .....	Arthur .....	College .....	24	1,500
Euclid .....	Robinson .....	Arthur .....	24	1,254
Franklin .....	Ruskin .....	North end .....	24	1,690
Frankish .....	Brock .....	Sheridan .....	21	434

TABLE No. 7.  
ASPHALT PAVEMENTS—1908-09.

Pavement Sq. yds.	Curb.			Completed.	Contractor.
	Width Liu. in.	Length Lin. ft.	Class.		
882	.....	.....	.....	April 23, 1908	Constructing & Pav. Co.
2,719	6	1,831	Concrete	May 28, 1908	" "
3,386	6	2,540	"	July 2, 1908	" "
3,452	.....	.....	.....	Aug. 27, 1908	Godson Contracting Co.
709	.....	.....	.....	Sept. 23, 1908	Day labor.
1,413	6	1,060	Concrete	Oct. 1, 1908	" "
2,640	6	1,980	"	June 24, 1908	Godson Contracting Co.
2,341	.....	.....	.....	June 1, 1908	" "
205	.....	.....	.....	Sept. 5, 1908	Day labor.
1,497	6	1,118	Concrete	June 17, 1908	Constructing & Pav. Co.
712	6	532	"	Sept. 10, 1908	" "
6,763	6	16	"	July 30, 1908	Warren Bit. Paving Co.
2,531	6	1,890	"	July 24, 1908	Constructing & Pav. Co.
6,120	6	3,712	"	Sept. 22, 1908	" "
3,145	6	2,655	Concrete	June 18, 1908	Constructing & Pav. Co.
2,713	.....	.....	.....	July 29, 1908	Godson Contracting Co.
2,170	6	112	"	Aug. 29, 1908	" "
4,471	.....	.....	.....	Aug. 18, 1908	" "
2,727	6	2,046	Concrete	July 14, 1908	" "
728	6	315	"	July 11, 1908	" "
4,739	.....	.....	.....	June 23, 1908	Godson Contracting Co.
4,546	6	38	Concrete	July 16, 1908	Constructing & Pav. Co.
4,706	.....	.....	.....	Sept. 9, 1908	" "
2,957	.....	.....	.....	June 1, 1908	Godson Contracting Co.
3,590	.....	.....	.....	June 1, 1908	" "
1,553	6	1,164	Concrete	June 2, 1908	Barber Asphalt Pav. Co.
16,141	6	9,668	"	Nov. 27, 1908	Constructing & Pav. Co.
3,499	.....	.....	.....	Oct. 10, 1908	Godson Contracting Co.
741	6	615	Concrete	Oct. 15, 1908	Day labor.
2,111	.....	.....	.....	Oct. 12, 1908	Barber Asphalt Pav. Co.
3,947	6	76	Concrete	July 4, 1908	Constructing & Pav. Co.
1,709	.....	.....	.....	May 30, 1908	Barber Asphalt Pav. Co.
1,025	6	871	Concrete	June 3, 1908	Godson Contracting Co.
585	.....	.....	.....	Oct. 30, 1908	Barber Asphalt Pav. Co.
4,005	6	3,004	Concrete	Nov. 14, 1908	Day labor.
3,378	.....	.....	.....	Nov. 20, 1908	Godson Contracting Co.
4,680	.....	.....	.....	Aug. 1, 1908	Day labor.
1,028	.....	.....	.....	July 28, 1908	Constructing & Pav. Co.

ASPHALT PAVEMENTS - *Continued.*

Street.	From.	To.	Width Lim. ft.	Length Lim. ft.
Gladstone . . . . .	College . . . . .	Lindsay . . . . .	24	332
Galley . . . . .	Roncesvalles . . . . .	Sorauren . . . . .	24	1,357
Geoffrey . . . . .	Roncesvalles . . . . .	Sorauren . . . . .	24	1,355
Gore . . . . .	Clinton . . . . .	West end . . . . .	21	297
Gerrard . . . . .	Logan, w.s. . . . .	700 ft. east . . . . .	26	700
Grace . . . . .	1,744 ft. north of College . . . . .	160 ft. further north . . . . .	21	160
Gerrard . . . . .	Parliament . . . . .	River, e.s. . . . .	28	2,162
Golden . . . . .	Dundas . . . . .	North end . . . . .	24	664
Gould . . . . .	Victoria . . . . .	Mutual . . . . .	28	916
Grace . . . . .	1,494 feet north of College . . . . .	250 ft. further north . . . . .	21	250
Gladstone . . . . .	Bloor . . . . .	990 ft. south . . . . .	24	990
Hamburg . . . . .	Bloor . . . . .	Van Horne . . . . .	24	3,129
Hamilton . . . . .	Kintyre . . . . .	Gerrard . . . . .	21	1,819
Hamilton . . . . .	Queen . . . . .	Kintyre . . . . .	18	558
Havelock . . . . .	College . . . . .	Bloor . . . . .	24	2,794
Huxley . . . . .	Jameson . . . . .	Tyndall . . . . .	24	1,824
Hallam . . . . .	Shaw . . . . .	Dovercourt . . . . .	24	1,584
Harbord . . . . .	Palmerston . . . . .	Clinton . . . . .	24	795
Harbord . . . . .	Spadina . . . . .	Huron . . . . .	24	467
Howard Park Avenue	Dundas . . . . .	Indian Rd. . . . .	26	1,711
James . . . . .	Queen . . . . .	Albert . . . . .	10 $\frac{1}{4}$	380
*Jarvis . . . . .	Queen . . . . .	Front . . . . .	40-44	276
Jordan (resurface) .	King . . . . .	Wellington . . . . .	23 $\frac{2}{3}$ -25 $\frac{3}{4}$	379
Jones . . . . .	Queen . . . . .	Gerrard . . . . .	24	2,430
Lindsay . . . . .	Havelock . . . . .	Dufferin . . . . .	24	881
Logan . . . . .	Gerrard . . . . .	Bain, n.s. . . . .	24	1,773
Lindsay . . . . .	Brock . . . . .	Dufferin . . . . .	24	979
Lennox . . . . .	Bathurst . . . . .	Borden . . . . .	24	570
Manning . . . . .	Bloor . . . . .	North end . . . . .	24	3,159
Major . . . . .	Bloor . . . . .	Lowther . . . . .	24	783
Mutual . . . . .	Carlton . . . . .	Maithland . . . . .	18 $\frac{1}{2}$	1,013
Moutray . . . . .	Sheridan . . . . .	Brock . . . . .	22	433
Montrose . . . . .	Bloor . . . . .	1,000 ft. sonth . . . . .	24	1,009
Massey . . . . .	King . . . . .	Queen . . . . .	24	1,173
Muir . . . . .	Dufferin . . . . .	Brock . . . . .	24	981
Northumberland .	Ossington . . . . .	Delaware . . . . .	21	527
Napier . . . . .	Munro . . . . .	West end . . . . .	20	324
O'Hara . . . . .	Queen . . . . .	North end . . . . .	24	1,665
Ontario . . . . .	King . . . . .	Duke . . . . .	23-8	265
Ontario . . . . .	Queen . . . . .	Duke . . . . .	24	765

ASPHALT PAVEMENTS—*Continued.*

Pavement Sq. yds.	Curb.			Completed.	Contractor.
	Width Lin. in.	Length Lin. ft.	Class.		
885				July 7, 1908	Day labor.
3,621				Oct. 8, 1908	Godson Contracting Co.
3,617				Sept 23, 1908	" " "
664	6	569	Concrete	July 6, 1908	Day labor.
2,792	6	1,457	"	Sept 14, 1908	Godson Contracting Co.
374	6	320	"	July 4, 1908	Constructing & Pav. Co.
7,028	6	4,946	"	Aug. 19, 1908	Godson Contracting Co.
1,832	6	10	"	Aug. 17, 1908	Constructing & Pav. Co.
3,056	6	73	"	July 11, 1908	Godson Contracting Co.
586				July 4, 1908	Constructing & Pav. Co.
2,640				Oct. 31, 1908	Godson Contracting Co.
8,443	6	6,314	Concrete	Sept. 25, 1908	Godson Contracting Co.
4,331	6	48	"	Sept. 4, 1908	Constructing & Pav. Co.
1,116				Sept. 1, 1908	" "
7,704	5	155	Concrete	June 18, 1908	Godson Contracting Co.
5,166	6	791	"	Aug. 4, 1908	" "
4,596	6	375	"	June 22, 1908	Constructing & Pav. Co.
2,120				July 27, 1908	Godson Contracting Co.
1,256				July 24, 1908	" "
4,998	6	73	Concrete	Oct. 29, 1908	" "
456				May 14, 1908	Day labor.
1,327	9	88	Concrete	May 23, 1908	Barber Asphalt Pav. Co.
1,045				July 11, 1908	Constructing & Pav. Co.
6,798				Sept. 4, 1908	" "
2,545	6	1,659	Concrete	Oct. 6, 1908	" "
5,193	6	119	"	Sep. 10, 1908	Godson Contracting Co.
2,735	6	1,978	"	May 14, 1908	Warren Bit. Paving Co.
1,523	6	1,140	"	Aug. 4, 1908	Constructing & Pav. Co.
8,914	6	347	"	June 12, 1908	Constructing & Pav. Co.
2,162				July 11, 1908	" "
2,172				July 23, 1908	Godson Contracting Co.
1,063				July 28, 1908	Constructing & Pav. Co.
2,678				July 16, 1908	Godson Contracting Co.
3,256				Nov. 13, 1908	Constructing & Pav. Co.
2,738	6	142	Concrete	Nov. 14, 1908	" "
1,230				July 22, 1908	" "
718	6	648	Concrete	July 24, 1908	" "
4,455	6	125	"	Nov. 21, 1908	Godson Contracting Co.
821				July 14, 1908	Constructing & Pav. Co.
2,083	6	45	Concrete	Aug. 29, 1908	Day Labor.

ASPHALT PAVEMENTS—*Continued.*

Street:	From.	To.	Width Lin. ft.	Length Lin. ft.
Parliament . . . . .	Wellesley, s.s. . . . .	45 ft. n. of s. s. of Howard.	24	1,287
Perth . . . . .	Bloor . . . . .	South end . . . . .	24	884
Parkway . . . . .	Dundas . . . . .	College . . . . .	24	883
Portland . . . . .	King . . . . .	Queen . . . . .	24	1,051
Parliament . . . . .	Winchester . . . . .	Wellesley . . . . .	26	810
Perth . . . . .	Royce . . . . .	C.P.R. . . . .	24	559
Richmond . . . . .	Victoria . . . . .	Church . . . . .	24	570
*Roncesvalles . . . . .	Queen . . . . .	Dundas . . . . .	26½	Sections
Russett . . . . .	Bloor . . . . .	987 ft. north . . . . .	22	987
Richmond . . . . .	Bay . . . . .	York . . . . .	26½	843
Springhurst . . . . .	350 ft. w. of Dufferin	Tyndall, w. s. . . . .	30	152
Springhurst . . . . .	Dufferin . . . . .	350 ft. west . . . . .	25	352
Simcoe (re-surface). . . . .	King . . . . .	Queen . . . . .	38	1,184
Scollard . . . . .	Yonge . . . . .	480 ft west . . . . .	23	480
Sultan . . . . .	St. Thomas . . . . .	West end . . . . .	24	178
Scollard . . . . .	480 ft. w. of Yonge	Hazelton . . . . .	21	998
Sinclair . . . . .	Conduit . . . . .	Chelsea . . . . .	24	599
St. Clarens . . . . .	Wallace . . . . .	Lappin . . . . .	21	927
Seaton . . . . .	Queen . . . . .	Carleton . . . . .	24	3,173
Shanley . . . . .	Salem . . . . .	Dufferin . . . . .	24-25	837
Shaw . . . . .	Arthur . . . . .	College . . . . .	24	1,501
Symington . . . . .	Royce . . . . .	North City limits . . . . .	24	457
Shuter . . . . .	Yonge . . . . .	Victoria . . . . .	35½	267
Shuter . . . . .	Victoria . . . . .	Jarvis . . . . .	28-31	1,151
Sherbourne(re-s'r'f'ce)	King . . . . .	Wilton . . . . .	22-26	2,607
VanHorne . . . . .	Dovercourt . . . . .	Ossington . . . . .	24	915
Wallace . . . . .	Dufferin . . . . .	Lansdowne . . . . .	24	1,955
Wallace . . . . .	Lansdowne . . . . .	1st tracks west . . . . .	24	598
				111,043

ASPHALT PAVEMENTS—*Continued.*

Pavement Sq. yds.	Curbs.			Completed.	Contractor.
	Width. Lin. in.	Length Lin. ft.	Class.		
3,691	6	2,552	Concrete	Sept. 9, 1908	Day Labor.
2,355	6	1,641	"	July 29, 1908	"
2,352	6	46	"	July 27, 1908	Constructing & Pav. Co.
2,802	.....	.....	.....	July 20, 1908	Godson Contracting Co.
2,623	.....	.....	.....	June 30, 1908	Day Labor. Order of Council.
1,625	6	79	Concrete	Oct. 30, 1908	Godson Contracting Co.
1,395	.....	.....	.....	Dec. 7, 1908	Constructing & Pav. Co.
at north and south ends still unfinished.	.....	.....	.....	Carried over to 1909	Warren Bituminous Pav. Co.
2,413	.....	.....	.....	June 26, 1908	Godson Contracting Co.
2,426	.....	.....	.....	May 21, 1908	" "
536	6	75	Concrete	Oct. 9, 1908	Barber Asphalt Pav. Co.
929	6	54	"	Oct. 7, 1908	Constructing & Pav. Co.
5,363	.....	.....	.....	May 4, 1908	" "
1,212	6	870	Concrete	Oct. 1, 1908	Day Labor.
480	6	374	"	May 8, 1908	" "
2,362	6	1,962	"	(Sept. 12, 1908)	" "
1,598	6	1,198	"	June 13, 1908	" "
2,162	.....	.....	.....	Sept. 16, 1908	Godson Contracting Co.
8,603	.....	.....	.....	July 9, 1908	" "
2,262	.....	.....	.....	Aug. 19, 1908	Day Labor.
4,074	6	63	Concrete	Aug. 24, 1908	Godson Contracting Co.
1,219	6	10	"	Aug. 5, 1908	" "
1,062	.....	.....	.....	Ang. 6, 1908	Constructing & Pav. Co.
3,959	6	52	Concrete	Oct. 29, 1908	Barber Asphalt Pav. Co.
7,413	6	280	"	June 12, 1908	" "
2,729	6	1,876	"	Sept. 22, 1908	Day Labor.
5,517	.....	.....	.....	Sept. 3, 1908	Godson Contracting Co.
1,660	6	35	Concrete	July 20, 1908	Constructing & Pav. Co.
313,532	.....	66,932	.....	.....	.....

## ASPHALT BLOCK.

Street,	From.	To.	Width Lin. Ft.	Length Lin. Ft.
Bathurst . . . . .	King . . . . .	Queen . . . . .	28	1,175
Colborne, . . . . .	Church . . . . .	West Market . . . . .	25 $\frac{2}{3}$	420
Northumberland . . .	Dovercourt . . . . .	Westmoreland . . . . .	21	268
West Market . . . . .	King . . . . .	Front . . . . .	44	358
Wolseley, . . . . .	Bathurst . . . . .	Markham . . . . .	24	273
Sackville. . . . .	King . . . . .	Eastern . . . . .	24	388
				2,882

## BITULITHIC.

+ Avenue Road . . . . .	St. Clair, s.s. . . . .	Lonsdale, n.s. . . . .	24	1,525
Avenue Road. . . . .	241 feet north of Cottingham.	350 ft. n. Balmoral	24	1,780
Binscarth . . . . .	Glen Road . . . . .	East end . . . . .	24	1,281
Binscarth . . . . .	Glen Road . . . . .	Pelham Place . . . . .	24	568
Charles . . . . .	Yonge . . . . .	Church . . . . .	24	938
Castle Frank Av., and Crescent.	McKenzie Ave . . . . .	East limit Lot 16 . . .	21	1,445
Edgar. . . . .	Schofield . . . . .	Glen Road . . . . .	24	1,302
East Roxborough. . . . .	Schofield . . . . .	Edgar . . . . .	24	981
Forest Hill Road. . . . .	St. Clair . . . . .	Lonsdale . . . . .	24	1,489
Glen Road. . . . .	Pelham Place . . . . .	East Roxborough . . . . .	24	1,172
Harbord. . . . .	Markham . . . . .	Palmerston . . . . .	24	265
Humboldt. . . . .	Poplar Plains. . . . .	Warren . . . . .	24	614
Leslie. . . . .	Queen . . . . .	Doel . . . . .	24	1,263
Leslie. . . . .	Doel, s.s . . . . .	Gerrard . . . . .	24	1,175
Lynd . . . . .	Dundas . . . . .	Neepawa. . . . .	24	58
Lynwood . . . . .	Avenue Road. . . . .	Poplar Plains. . . . .	24	606
Manchester. . . . .	Shaw . . . . .	Ossington . . . . .	21	600
Murray . . . . .	Cær Howell . . . . .	Orde . . . . .	21	827
Marjory. . . . .	Gerrard . . . . .	424 ft. south . . . . .	24	424
Maple. . . . .	Glen, w.s. running s. . . . .	Dale . . . . .	24	1,129
Poplar Plains. . . . .	Macpherson, s.s. . . . .	Edmund . . . . .	20	1,93
Roxborough, East. . . . .	Yonge : . . . . .	2,180 ft. east . . . . .	24	2,184
Roxborough. . . . .	Yonge . . . . .	632 ft. e. Avenue Rd. . . . .	33	1,330
Trafalgar . . . . .	Gladstone . . . . .	Dufferin . . . . .	24	346
Wickson . . . . .	Yonge . . . . .	West end . . . . .	21	1,581
Wilton Crescent. . . . .	George . . . . .	Sherbourne . . . . .	30	734
				28,120

## ASPHALT BLOCK.

Pavement Sq. yds.	Curbs.			Completed.	Contractor.
	Width Lin. inch.	Length Lin. ft.	Class.		
4,115				July 4, 1908	C. W. Dill & Co.
1,198				Oct. 2, 1908	Day Labor.
638				Nov. 11, 1908	Excelsior Con. & Pav. Co.
1,751				Sep. 15, 1908	Day Labor.
732				Oct. 16, 1908	Construction & Pav. Co.
1,035				Sep. 22, 1908	Day Labor.
9,469					

## BITULITHIC.

4,791	6	3,296	Concrete	Carried over to 1909.	Warren Bit. Paving Co.
4,936	6	3,532	"	July 15, 1908	" " "
3,595	6	70	"	Aug. 10, 1908	" " "
				Oct. 21, 1908	Constructing & Pav. Co.
1,511	6	987	"	Dec. 4, 1908	Concrete base. Warren Bit. Paving Co.
2,503				Sep. 24, 1908	Bitulithic surface.
4,419	6	3,034	Concrete	Aug. 6, 1908	" "
4,299	6	2,537	"	Oct. 5, 1908	" "
2,656	6	1,962	"	Oct. 8, 1908	" "
4,105	6	162	"	Oct. 13, 1908	" "
4,194	6	7	"	Nov. 6, 1908	" "
708				Aug. 17, 1908	" "
1,642	6	1,228	Concrete	June 1, 1908	" "
3,368				Aug. 26, 1908	" "
3,508	6	13	Concrete	Aug. 27, 1908	" "
1,777	6	46	"	Oct. 22, 1908	" "
1,614	6	1,217	"	Sep. 25, 1908	" "
1,402	6	1,201	"	Aug. 20, 1908	" "
1,984	6	54	"	May 19, 1908	" "
1,131				Sep. 1, 1908	" "
3,201	6	35	Concrete	Nov. 13, 1908	" "
4,441	6	3,789	"	July 20, 1908	" "
6,575	6	163	"	July 21, 1908	" "
4,937				Sep. 21, 1908	" "
923				Aug. 18, 1908	" "
3,745				Aug. 15, 1908	" "
2,574				Sep. 3, 1908	" "
80,539		23,333			

## BRICK.

Street.	From.	To.	Width Lin. Ft.	Length Lin. Ft.
Balsam .....	Spadina .....	Charlotte .....	18.9	292
Buller .....	Kippendavie .....	West end .....	24	231
Clarke .....	Bolton .....	Grant .....	18	436
Fraser .....	133 feet south of Railway tracks .....	Liberty .....	24	722
Grandview .....	Logan .....	643 feet west .....	21	644
Lane 1st n. of Front .....	Spadina .....	East end .....	14-19.2	383
Lane bet'w'n Edward and Elm. ....	Chestnut .....	Centre .....	13	275
Mountstephen .....	Broadview .....	Mumro .....	24	426
River .....	King .....	Queen .....	24	129
St. Helens .....	Dundas .....	Bloor .....	24	2,902
Wascana .....	Sumach .....	East end .....	18	311
				6,751

## VITRIFIED BLOCK.

Dundas .....	Lansdowne, e.s. ....	Bridge .....	23	604
*Don Esplanade w. ....	Queen .....	Mark .....	28	Totals e
Frederick .....	King .....	Front .....	28	273
Front .....	George, w.s. ....	Sherbourne, e.s. ....	28	720
Harbor .....	Yonge .....	Bay .....	42	503
Lane 1st east of York .....	Piper .....	Wellington .....	10 $\frac{5}{6}$ -13 $\frac{3}{4}$	198
Lane 1st east of Yonge .....	Wilton .....	Gould .....	15	573
Lane 1st n. of Front .....	Church .....	West Market .....	14	421
Lane 1st s. of King .....	Church .....	West Market .....	15.2-20	441
Lane 1st s. of Queen .....	Church .....	East end .....	12	440
Parliament .....	King .....	Mill, s.s .....	32	852
Queen east .....	River, w.s .....	Don Bridge .....	28	380
Sherbourne .....	Front .....	King .....	28	273
				5,678

## BRICK.

Pavement Sq. Yds.	Curbs.			Completed.	Contractor.
	Width Lin. In.	Length Lin. ft.	Class.		
617				May 16, 1908	Day labor.
613	6	5	Concrete	Aug. 18, 1908	J. K. McKnight.
908	6	864	"	June 15, 1908	"
1,923	6	1,421	"	Sep. 30, 1908	Godson Contracting Co.
1,503	6	1,288	"	June 13, 1908	J. Connolly.
608	6	443	"	May 26, 1908	Day labor.
387	6	552	"	June 1, 1908	"
1,210	6	793	"	Sep. 2, 1908	J. Maguire.
341				Sep. 18, 1908	Day labor.
7,904	6	74	Concrete	Nov. 23, 1908	Reeve Concrete Pav. Co.
628				July 4, 1908	Day labor.
16,642		5,440			

## VITRIFIED BLOCK.

862	6	592	Concrete	Carried over to 1909.	Constructing & Pav. Co.
embodied in Report for 1907	6	573	Concrete	May 16, 1908	Day labor.
833	6	573	Concrete	Nov. 25, 1908	"
2,143	6	915	"	July 31, 1908	Godson Contracting Co.
2,266	6	593	"	Oct. 17, 1908	Day labor.
275	6	284	"	Aug. 25, 1908	Reeve Concrete Pav. Co.
1,050	6	831	"	June 30, 1908	"
742				Oct. 23, 1908	Day labor.
849	6	47	Concrete	Nov. 12, 1908	"
705	6	216	"	June 3, 1908	"
2,415	6	1,454	"	June 26, 1908	"
1,261	6	744	"	Carried over to 1909.	J. Maguire.
805	6	502	"	Nov. 25, 1908	Day labor.
14,206		6,751			

## MACADAM.

Street.	From.	To.	Width Lin. ft.	Length Lin. ft.
Cluny .....	Crescent Rd .....	Roxborough .....	21	282
Huntley .....	Elm .....	The Bridge .....	24	350
Parkview .....	175 feet north of 63 feet further north Wellesley.		24	68
Pinehill Rd. (Recon.)	Rosedale Road .....	West end .....	18	298
Winchester (Recon.).	Sumach .....	Danforth .....	24-30	4,140
				5,138

## CEDAR BLOCK ON CONCRETE.

Esplanade .....	Scott, w.s. ....	Yonge .....	40-50.2	314
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## CONCRETE PAVEMENTS.

Bright .....	King .....	Queen .....	20	513
La. 1st e. of Victoria	100 ft. n. of Shuter	Wilton .....	13½	470
Lane 1st s. of Queen	Esther .....	McDougal's Lane ..	10	389
Lane 1st e. of Jarvis	Shuter .....	182 ft. north .....	11	182
Lane 1st n. of Front	York .....	269 ft. west .....	14½-17½	265
Lane 1st n. of King	Bay .....	183 ft. e. and thence s. 91 ft. 8 in. ....	8-15	272
Lane 1st s. of Queen, Peter	.....	248 ft. west .....	14	270
Lane bet. Borden and College . Lippincott.	.....	VanKoughnet .....	17	562
				2,928

## GRANITE BLOCK TRACK ALLOWANCE.

Gerrard .....	165 ft. e. of Leslie ..	509 ft. further east ..	15.2	509
Richmond .....	Church .....	Victoria .....	18	571
				1,080

## MACADAM.

Pavement Sq. yds.	Curbs.			Completed.	Contractor.
	Width Lin. in.	Length Lin. ft.	Class.		
659	.....	.....	.....	May 6, 1908	Day labor, Order of Council.
919	.....	.....	.....	May 9, 1908	Day labor.
179	4	68	Wood ..	May 12, 1908	"
655	6	627	Concrete	Nov. 13, 1908	Day labor.
9,905	.....	.....	.....	July 7, 1908	Day labor, Order of Council.
12,317	.....	695	.....	.....	.....

## CEDAR BLOCK ON CONCRETE.

1,696	6	621	Concrete	July 13, 1908	Day labor, order of Council
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## CONCRETE PAVEMENTS.

1,143	6	1,039	Concrete	Aug. 18, 1908	Cres. Concrete Pav. Co.
707	6	942	"	July 31, 1908	Constructing & Pav. Co.
529	.....	.....	.....	June 4, 1908	Day labor.
225	6	124	Concrete	Sep. 2, 1908	Graut Contracting Co.
477	6	78	"	Oct. 5, 1908	"
365	.....	.....	.....	May 13, 1908	Crescent Con. Pav. Co.
421	6	45	Concrete	Oct. 13, 1908	Day labor.
1,095	.....	.....	.....	Nov. 16, 1908	Crescent Con. Pav. Co.
4,962	.....	2,228	.....	.....	.....

## GRANITE BLOCK TRACK ALLOWANCE.

860	.....	.....	.....	Sep. 21, 1908	Day labor.
1,142	.....	.....	.....	Dec. 5, 1908	Constructing & Pav. Co.
2,002	.....	.....	.....	.....	.....

## TRACK ALLOWANCE RECONSTRUCTION.

Street.	From.	To.	Width Lin. ft.	Length Lin. ft.
Bloor . . . . .	Dufferin . . . . .	Lansdowne . . . . .	18	1,956
College . . . . .	Spadina . . . . .	McCaull . . . . .	16.5	1,697
College . . . . .	Havelock . . . . .	Dovercourt . . . . .	16.5	776
Dupont . . . . .	Avenue Rd. . . . .	Walmer Rd . . . . .	16.5	2,898
Dundas . . . . .	Ossington . . . . .	Lansdowne . . . . .	16.5	4,968
Dundas . . . . .	Arthur . . . . .	Argyle . . . . .	16.5	865
Front . . . . .	Yonge . . . . .	Church . . . . .	16.5	950
Front . . . . .	George . . . . .	Sherbourne . . . . .	16.5	609
Front . . . . .	York . . . . .	Simcoe . . . . .	11.5	630
King . . . . .	Spadina . . . . .	Bathurst . . . . .	18	2,020
Queen . . . . .	Woodbine . . . . .	Lentz Park . . . . .	15.2	2,589
Queen . . . . .	Church . . . . .	River . . . . .	16.5	5,247
Queen . . . . .	Broadview . . . . .	G.T.R . . . . .	16.5	1,110
Queen . . . . .	Bathurst . . . . .	Dundas . . . . .	16.5	4,035
Queen . . . . .	Pape . . . . .	Kingston Rd . . . . .	16.5	5,176
Queen west . . . . .	Roncesvalles . . . . .	Around Sunnyside Loop . . . . .	{ 18 9	{ 490 247
Rosedale Loop . . . . .	Sherbourne . . . . .	S.s Elm Ave . . . . .	8.25	2,742
Sherbourne . . . . .	Bridge . . . . .	Elm Ave . . . . .	16.5	476
Spadina . . . . .	S.s Spadina Cres . . . . .	Bloor . . . . .	{ 16.5 8.25	{ 2,345 1,319
Springhurst . . . . .	Dufferin . . . . .	West and south . . . . .	8.25	573
				43,718

## INTERSECTIONS.

College, Yonge and Carlton . . . . .				
King and Bathurst . . . . .				
Lentz Park . . . . .				
Queen and Shaw . . . . .				
Queen and Dundas . . . . .				
Richmond & Victoria . . . . .				
Richmond & Church . . . . .				
York and King . . . . .				
York and Front . . . . .				

## TRACK ALLOWANCE RECONSTRUCTION.

Pavement Sq. yds.	Curb			Completed.	Contractor.
	Width Lin. in.	Length Lin. ft.	Class.		
3,912				Aug. 29, 1908	Day labor.
3,111				Aug. 5, 1908	"
1,423				Dec. 23, 1908	"
5,313				June 15, 1908	"
9,108				Sep. 28, 1908	"
1,586				June 1, 1908	"
1,742				July 9, 1908	"
1,116				Aug. 30, 1908	"
805				Nov. 2, 1908	"
4,040				Sep. 2, 1908	"
4,372				June 4, 1908	"
9,619				Dec. 11, 1908	"
2,035				Dec. 4, 1908	"
7,398				Aug. 6, 1908	"
9,489				July 23, 1908	"
980				Dec. 2, 1908	"
247				Dec. 2, 1908	"
2,513				June 5, 1908	"
873				June 5, 1908	"
4,299				May 28, 1908	"
1,209				May 28, 1908	"
525				Aug. 20, 1908	"
<b>75,715</b>					

## INTERSECTIONS.

661				Apl. 24, 1908	Day labor.
288				Aug. 29, 1908	"
309				June 4, 1908	"
66				July 11, 1908	"
150				Ang. 1, 1908	"
162				Dec. 5, 1908	"
404				Nov. 28, 1908	"
369				Aug. 29, 1908	"
540				Aug. 29, 1908	"
<b>2,949</b>					

## GRADING.

Street.	From.	To.	Width Lin. ft.	Length Lin. ft.
Boultbee . . . . .	Jones . . . . .	648 feet east, . . . . .	38	648
Grace . . . . .	Bloor . . . . .	530 feet south, . . . . .	40	530
Hampton . . . . .	Sparkhall, . . . . .	Hogarth . . . . .	38	744
Keele. . . . .	Howard Park. . . . .	Bloor. . . . .	40	2,186
Kew Beach. . . . .	Woodbine. . . . .	Kippendavie. . . . .	38	460
Rusholme . . . . .	College. . . . .	St. Anne's . . . . .	50	662
				5,230

\*Carried over from 1907.

†Carried over from 1907 to 1909.

## CONCRETE CURBS.

Street.	From.	To.	Side.
Bolton . . . . .	Queen . . . . .	Gerrard . . . . .	West . . . . .
Binsearch . . . . .	Glen Road . . . . .	East End . . . . .	South . . . . .
Binsearch . . . . .	950 ft. E. of Glen Rd.	East End . . . . .	North . . . . .
Bathurst . . . . .	Queen . . . . .	Farley . . . . .	East . . . . .
Bathurst . . . . .	Adelaide . . . . .	Farley . . . . .	East . . . . .
Bathurst . . . . .	1st Lane s. of Queen.	s. branch of McDonnell Square . . . . .	West . . . . .
Berkeley. . . . .	Queen. . . . .	Duke . . . . .	East . . . . .
Berkeley. . . . .	Duke . . . . .	Duchess . . . . .	West . . . . .
Balsam . . . . .	Spadina . . . . .	Charlotte . . . . .	North . . . . .
College . . . . .	600 ft. w. of Sorauren	Roncesvalles . . . . .	North . . . . .
College . . . . .	Sorauren. . . . .	Roncesvalles . . . . .	South . . . . .
Charles . . . . .	600½ ft. w. of Yonge.	Church . . . . .	South . . . . .
Campbell . . . . .	Antler . . . . .	Royce . . . . .	West . . . . .
Curzon . . . . .	587 ft. n. of Queen.	Sproatt . . . . .	West . . . . .
Dewson. . . . .	Ossington . . . . .	Delaware . . . . .	North . . . . .
Dewson. . . . .	Ossington . . . . .	Delaware . . . . .	South . . . . .
Dewson. . . . .	Dovercourt. . . . .	Havelock . . . . .	South . . . . .
Duchess. . . . .	Berkeley . . . . .	Parliament . . . . .	North . . . . .
Duchess. . . . .	100 ft. w. of Ontario	Sherbourne . . . . .	South . . . . .
Duchess . . . . .	Ontario . . . . .	MacFarren's Lane . . . . .	North . . . . .
Duchess. . . . .	Jarvis . . . . .	Sherbourne . . . . .	South . . . . .
Duchess. . . . .	George . . . . .	Sherbourne . . . . .	North . . . . .
Duke . . . . .	Sherbourne . . . . .	Ontario . . . . .	South . . . . .
Duke . . . . .	Berkeley. . . . .	Parliament . . . . .	South . . . . .
Duke . . . . .	Berkeley . . . . .	Ontario . . . . .	North . . . . .
Delaware . . . . .	Hepburne. . . . .	Bloor . . . . .	West . . . . .

## GRADING.

Cu. yds. Cut.	Cu. yds. Fill.		Completed.	Contractor.
1,133	1,056	.....	June 18, 1908	J. F. Connolly.
4,087	.....	.....	June 16, 1908	Day labor, order of Council
2,126	172	.....	Aug. 26, 1908	Page & Britnell.
26,423	10,057	.....	Sep. 8, 1908	Day labor.
.....	1,325	.....	Oct. 16, 1908	J. H. McKnight.
1,378	578	.....	July 8, 1908	Excelsior Con. & Pav. Co.
35,147	13,188	.		

## CONCRETE CURBS.

Width. lin. inches.	Length. lin. feet.	Completed.	Contractor.
6	2,109.0	Aug. 4, 1908.....	Warren Bit. Pav. Co.
6	1,276.0	Aug. 10, 1908 .....	" "
6	229.0	Aug. 10, 1908 .....	" "
6	281.5	July 4, 1908.....	C. W. Dill & Co. "
6	486.7	July 4, 1908.....	" "
6	666.3	July 4, 1908.....	" "
6	836.0	May 26, 1908.....	Godson Con. Co.
6	453.7	June 1, 1908.....	" "
6	291.0	May 16, 1908.....	Day labor.
6	821.6	Aug. 18, 1908.....	Godson Con. Co.
6	1,363.0	Aug. 18, 1908.....	" "
6	337.0	Sept. 24, 1908.....	Warren Bit. Pav. Co.
5	620.2	Sept. 9, 1908.....	Crescent Concrete Pav. Co.
5	1,357.0	Nov. 26, 1908.....	A. Gardner & Co.
6	642.9	June 19, 1908.....	Godson Con. Co.
6	642.9	June 19, 1908.....	" "
6	723.3	June 19, 1908.....	" "
6	296.4	May 16, 1908 .....	" "
6	501.0	May 16, 1908 .....	" "
6	446.0	May 16, 1908 .....	" "
6	877.8	May 16, 1908 .....	" "
6	628.0	May 16, 1908 .....	" "
6	561.7	July 16, 1908 .....	Const'g & Pav. Co.
6	331.3	July 16, 1908 .....	" "
6	398.8	July 16, 1908 .....	" "
6	773.0	Sept. 9, 1908 .....	" "

CONCRETE CURBS—*Continued.*

Street.	From	To.	Side.
Defoe	Shaw	Niagara	North
Duchess	Sherbourne	MacFarren's Lane	North
Emerson	Paton Road, s.s.	Wallace	East
Franklin	Ruskin	North End	East
Franklin	Ruskin	Royce	West
Franklin	Edith	North End	West
Frankish	132 ft. w. of Sheridan	Brock	South
Foxbar Road	Avenue Rd.	St. Clair	S. & E.
Geoffrey	Sorauren	Roncesvalles	North
Golden	Dundas	North End	East
Gladstone	740 ft. s. of Bloor	250 ft. further south	East
Glen Road	n.s. Pelham Pl. (prod.)	East Roxborough	East
Glen Road	Bincarath	East Roxborough	West
Havelock	College	Dewson, n.s.	West
Havelock	392 ft. n. of n.s. Dewson	Bloor	West
Harbord	Markham	Manning	South
Hallam	Shaw	Dovercourt	North
Hallam	Shaw	Concord	South
Hamilton	Kintyre	Gerrard	West
Harrison	Ossington	Lakeview	South
Jones	Queen	Gerrard	East
Jones	683.3 ft. n. of Queen	311 ft. further north	West
Logan	Withrow	Bain, n.s.	East
Langley	Broadview	Logan	South
Langley	Broadview	Logan	North
Leslie	Queen	Doel	West
Leslie	Doel	Sproatt	West
Maple	Glen Road	452 ft. east	North
Manning	Bloor	North End	East
Montrose	Bloor	1000 ft. south	West
Mutual	167 ft. n. of Carlton	Alexander	West
Moutray	Brock	Sheridan	North
Moutray	132 ft. 6 in. w. of Brock	Brock	South
	Sheridan		
Manning	Robinson	Arthur	East
Manning	Robinson	Arthur	West
Muir	Brock	Sheridan	North
Maple	Powell	Dale	South
Northumberland	Westmoreland	Dovercourt	South
Ontario	Duke	King	West
Ontario	Duke	Duchess	East
O'Hara	Queen	Marion	West
Parliament	Winchester	Wellesley	East
Perth	251 ft. north of Royce	Tracks	East
Perth	Royce	Hugo	West
Parliament	Prospect	Wellesley	West
Russell	Bloor	987 feet north	East
Roxborough	Yonge	2,180 feet east	North
Roxborough	Yonge	Cluny	South

CONCRETE CURBS—*Continued.*

Width. lin. inches.	Length. lin. feet.	Completed.	Contractor.
5	1,647.3	Aug. 6, 1908.....	Reeve Concrete Pav. Co.
6	135.8	May 16, 1908.....	Godson Con. Co.
6	750.8	June 29, 1908.....	Const'g & Pav. Co.
6	1,687.9	Aug. 1, 1908.....	Day labor.
6	998.8	Aug. 1, 1908.....	"
6	416.9	Aug. 1, 1908.....	"
6	301.7	July 28, 1908.....	Const'g & Pav. Co.
5	1,301.0	Aug. 4, 1908.....	Bay labor (Order of Council).
5	1,376.2	July 24, 1908.....	Crescent Concrete Pav. Co.
6	668.5	Aug. 17, 1908.....	Const'g & Pav. Co.
6	250.0	Oct. 31, 1908.....	Godson Con. Co.
6	1,132.4	Oct. 12, 1908.....	Warren Bit. Pav. Co.
6	791.0	Oct. 12, 1908.....	" "
6	920.0	June 19, 1908.....	Godson Contracting Co.
6	1,421.4	June 19, 1908.....	" "
6	{ 542.0	July 27, 1908.....	Godson Contracting Co.
6	{ 263.7	Aug. 17, 1908.....	Warren Bituminous Pav'g Co.
6	1,532.2	June 17, 1908.....	Constructing & Paving Co.
6	905.7	June 17, 1908.....	" "
6	1,811.0	Sept. 4, 1908.....	" "
5	421.4	May 22, 1908.....	W. R. Payne.
6	2,457.0	Sept. 4, 1908.....	Constructing & Paving Co.
6	310.0	Sept. 4, 1908.....	" "
6	318.9	Sept. 10, 1908.....	Godson Contracting Co.
6	1,933.0	April 24, 1908.....	Day labor.
6	1,934.7	April 28, 1908.....	"
6	1,296.6	Aug. 26, 1908.....	Warren Bituminous Pav. Co.
6	667.0	Aug. 26, 1908.....	" "
6	488.5	Nov. 13, 1908.....	" "
6	3,135.0	June 6, 1908.....	Constructing & Paving Co.
6	1,001.0	July 16, 1908.....	Godson Contracting Co.
6	393.2	July 23, 1908.....	" "
6	433.0	July 28, 1908.....	Constructing & Paving Co.
6	300.0	July 28, 1908.....	" "
5	1,299.4	Sept. 18, 1908.....	Day labor.
5	1,349.8	Sept. 28, 1908.....	"
6	432.0	Nov. 14, 1908.....	Constructing & Paving Co.
6	526.0	Nov. 13, 1908.....	Warren Bituminous Co.
6	265.7	Nov. 11, 1908.....	Excelsior Constr'g & Pav. Co.
6	265.2	July 14, 1908.....	Constructing & Paving Co.
6	414.5	Aug. 29, 1908.....	Day labor.
6	774.0	Nov. 21, 1908.....	Godson Contracting Co.
6	767.4	June 30, 1908.....	Day labor.
6	302.5	Oct. 30, 1908.....	Godson Contracting Co.
6	288.4	Oct. 30, 1908.....	" "
6	376.0	June 30, 1908.....	Day labor.
6	988.8	June 22, 1908.....	Godson Contracting Co.
6	1,298.5	July 21, 1908.....	Warren Bit. Paving Co.
6	892.8	July 21, 1908.....	" "

CONCRETE CURBS—*Continued.*

Street.	From.	To.	Side.
Russett . . . . .	N. limit of No. 72 . . . . .	North End . . . . .	West . . . . .
Seaton . . . . .	Queen . . . . .	Wilton . . . . .	East . . . . .
Symington . . . . .	Royce . . . . .	N. City limit . . . . .	West . . . . .
Springhurst . . . . .	w.s. Tyndall (prod.) . . . . .	Spencer . . . . .	South . . . . .
Shanly . . . . .	Salem . . . . .	Dufferin . . . . .	North . . . . .
Shanly . . . . .	Salem . . . . .	Hamburg . . . . .	South . . . . .
Sorauren . . . . .	Queen . . . . .	Wright . . . . .	West . . . . .
Sorauren . . . . .	Queen . . . . .	Wright . . . . .	East . . . . .
St. Joseph . . . . .	Yonge . . . . .	St. Vincent . . . . .	South . . . . .
St. Joseph . . . . .	Yonge . . . . .	Chapel Lane . . . . .	North . . . . .
St. Helens . . . . .	Dublin . . . . .	Dundas . . . . .	West . . . . .
Tyndall . . . . .	King . . . . .	Springhurst . . . . .	East . . . . .
Tyndall . . . . .	King . . . . .	Springhurst . . . . .	West . . . . .
Trafalgar . . . . .	Gladstone . . . . .	Dufferin . . . . .	South . . . . .
Wallace . . . . .	Dufferin . . . . .	Emerson . . . . .	South . . . . .
Wallace . . . . .	Dufferin . . . . .	Lansdowne . . . . .	North . . . . .
Wickson . . . . .	1,339 ft. w. of Yonge . . . . .	Alcorn . . . . .	N. and W. . . . .
Wilton Crescent . . . . .	193 ft. 5 in. west of Pembroke . . . . .	George . . . . .	South . . . . .
Wilton Crescent . . . . .	Pembroke . . . . .	Sherbourne . . . . .	North . . . . .

Summary : Length in feet . . . . .

Length in miles . . . . .

## PRIVATE CONCRETE SIDEWALKS—1908-09.

Street.	From.	To.	Side.	Width Feet.
1 Avenue Rd. . . . .	Farnham . . . . .	169.6 ft. north . . . . .	East . . . . .	5
2 Binsearch . . . . .	Opp. Nos. 70-76 . . . . .	North . . . . .	North . . . . .	5
3 Bloor . . . . .	Gladstone . . . . .	23.1 ft. west . . . . .	North . . . . .	10.9
4 Bloor . . . . .	Montr. se . . . . .	40.2 ft. east . . . . .	South . . . . .	5
5 Broadview . . . . .	Opp. Nos. 752 and 754 . . . . .	West . . . . .	West . . . . .	10
6 Berkeley . . . . .	Gerrard . . . . .	1st lane north . . . . .	East . . . . .	5
7 Bedford Rd . . . . .	Opp. No. 44 . . . . .	West . . . . .	West . . . . .	5
8 Bloor . . . . .	Margueretta . . . . .	19 ft. west . . . . .	South . . . . .	14.3
9 Broadview . . . . .	Opp. No. 716 . . . . .	West . . . . .	West . . . . .	6
10 Crescent Rd . . . . .	Opp. No. 184 . . . . .	East . . . . .	East . . . . .	6
11 Crescent Rd . . . . .	Opp. Nos. 131-133 . . . . .	South . . . . .	South . . . . .	4
12 College . . . . .	Ossington . . . . .	40.2 ft. west . . . . .	South . . . . .	11.8
13 College . . . . .	Opp. No. 890 . . . . .	North . . . . .	North . . . . .	6
14 Cottingham . . . . .	11.4 ft. w. of Yonge . . . . .	108.3 ft. further w. . . . .	South . . . . .	6

CONCRETE CURBS—*Continued.*

Width, lin. inches.	Length, lin. feet.	Completed.	Contractor.
6	224.0	June 26, 1908.....	Godson Contracting Co.
5	1,384.0	May 30, 1908.....	Excelsior Constr'ng & Pav. Co.
6	464.7	Aug. 25, 1908.....	Godson Contracting Co.
6	385.5	Aug. 19, 1908.....	" "
6	833.1	Aug. 19, 1908.....	Day labor.
6	555.1	Aug. 19, 1908.....	" "
6	2,561.0	Nov. 6, 1908.....	Grant Contracting Co.
6	2,481.5	Nov. 21, 1908.....	" "
6	615.3	Aug. 18, 1908.....	A. Gardner & Co.
6	698.0	Aug. 18, 1908.....	" "
6	1,713.0	Oct. 13, 1908.....	Grant Contracting Co.
6	1,476.0	July 21, 1908.....	Day labor.
6	1,478.7	July 15, 1908.....	" "
6	345.0	Aug. 18, 1908.....	Warren Bit. Paving Co.
6	1,440.5	Aug. 29, 1908.....	Godson Contracting Co.
6	1,913.8	Aug. 29, 1908.....	" " "
6	248.0	Aug. 15, 1908.....	Warren Bit. Paving Co.
6	244.0	Sept. 3, 1908.....	" " "
6	336.0	Sept. 3, 1908.....	" " "
<hr/>		81,442.9	
<hr/>		15,424	

## PRIVATE CONCRETE SIDEWALKS—1908-09.

Length, Feet.	Curb.		Completed.	Contractor.
	Class.	Length, Feet.		
194.6				Private.
149.3	5-in. Con.	149.3		"
43.1				"
57.7				"
50.4				"
145.0				"
59.7				"
59.1	5-in. Con.	27.5		"
47.3				"
130.0				"
219.4				"
53.0	6-in. Con.	75.2		"
20.0				"
108.3	5-in. Con.	106.7		"

## PRIVATE CONCRETE SIDEWALKS—Continued.

No.	Street.	From.	To.	Side.	Width. Feet.
15	College . . . . .	40.2 ft. w. of Ossington.	110.6 ft. further w.	South . .	11½
16	Dovercourt . . . . .	Harrison . . . . .	199 ft. north . . . . .	East . . .	5½
17	Dundas . . . . .	Queen . . . . .	40 ft. north . . . . .	West . .	12
18	Dovercourt . . . . .	Harrison . . . . .	121.5 ft. south . . . . .	East . . .	5½
19	Dovercourt . . . . .	Shannon . . . . .	223.7 ft. south . . . . .	East . . .	5½
20	Dovercourt . . . . .	Opp. Nos. 300-322 . . . . .	.....	West . . .	5
21	Davenport . . . . .	Avenue Rd. . . . .	66.4 ft. east . . . . .	South . .	8.8
22	Dewson . . . . .	Ossington . . . . .	46 ft. west . . . . .	North . .	5
23	Dundas . . . . .	Parkway . . . . .	164.5 ft. west . . . . .	South . .	5
24	Dewson . . . . .	108.9 ft. e. of Delaware.	7 ft. further east . . . . .	South . .	5
25	Denison . . . . .	Wolseley . . . . .	65.2 ft. north . . . . .	West . .	5
26	Dundas . . . . .	164.5 ft. w. of Parkway.	64.2 ft. further w. . . . .	South . .	16.7
27	Front . . . . .	Sherbourne . . . . .	124.7 ft. west of Frederick.	North . .	5.9
28	Front . . . . .	York . . . . .	99.8 ft. west . . . . .	South . .	11.5
29	Gladstone . . . . .	Dundas . . . . .	489 ft. north . . . . .	West . .	5
30	Grange Ave . . . . .	Esther . . . . .	87.1 ft. east . . . . .	South . .	5
31	Hallam . . . . .	Gladstone . . . . .	92.3 ft. west . . . . .	North . .	5
32	Hogarth . . . . .	Opp. No. 61 . . . . .	.....	South . .	5
33	Havelock . . . . .	Sylvan . . . . .	32 3 ft. north . . . . .	West . .	4½
34	Harrison . . . . .	Opp. Tor. Street Ra	ilway Station . . . . .	North . .	5
35	Harrison . . . . .	151 ft. e. of Dovercourt.	Lakeview . . . . .	North . .	5
36	Irwin . . . . .	St. Nicholas . . . . .	1st lane west . . . . .	South . .	4
37	Knox . . . . .	Queen . . . . .	141.8 ft. south . . . . .	East . . .	5
38	King East . . . . .	Opp Royal Bank, N	os. 8-12 . . . . .	North . .	12.1
39	King . . . . .	Spadina . . . . .	45.6 ft. west . . . . .	North . .	16
40	Lane in rear of H.	A. Wilson, 297-299	Yonge . . . . .	West . .	2.3
41	Lisgar . . . . .	Opp. Nos. 227-233 . . . . .	.....	East . . .	4
42	Lansdowne . . . . .	Opp. Nos. 754 & 756 . . . . .	.....	West . .	10.6
43	La. 1st w. Chapel.	St. Mary . . . . .	477 ft. south . . . . .	West . .	4.5
44	Mineing Lane . . . . .	Wellington . . . . .	102.7 ft. north . . . . .	West . .	2.9
45	Maepherson . . . . .	Poplar Plains . . . . .	68.5 ft. east . . . . .	South . .	4
46	Maple . . . . .	Glen Rd . . . . .	109 ft. east . . . . .	South . .	5
47	Ossington . . . . .	College . . . . .	5.6 ft. south . . . . .	West . .	13.5
48	Poplar Plains . . . . .	Maepherson . . . . .	14 ft. south . . . . .	East . . .	4
49	Queen . . . . .	Wheeler . . . . .	49.8 ft. west . . . . .	North . .	8.1-6
50	Queen . . . . .	Knox . . . . .	42.1 ft. east . . . . .	South . .	10.5
51	Queen . . . . .	Victoria . . . . .	45.4 ft. west . . . . .	South . .	12.5
52	Roncesvalles . . . . .	Pearson . . . . .	105 ft. north . . . . .	West . .	5
53	Scollard . . . . .	Opp. Nos. 118-123 . . . . .	.....	South . .	4.8
54	Scollard . . . . .	Opp. Nos. 106-110 . . . . .	.....	North . .	5
55	Scollard . . . . .	Opp. No. 107 . . . . .	.....	South . .	4.8

PRIVATE CONCRETE SIDEWALKS—*Continued.*

Length. Feet.	Curb.		Completed.	Contractor.
	Class.	Length. Feet.		
110.6	6-in. Con.	110.6	..... . . .	Private.
224.8	6-in. "	228.8	.....	"
40.0	.....	.....	.....	"
147.0	6-in. Con.	151.5	.....	"
254.2	6-in. "	274.7	.....	"
238.4	5-in. "	238.4	.....	"
66.4	.....	.....	.....	"
46.0	.....	.....	.....	"
196.5	.....	.....	.....	"
7.0	.....	.....	.....	"
93.7	.....	.....	.....	"
64.2	.....	.....	.....	"
349.8	.....	.....	.....	"
110.8	.....	.....	.....	"
489.0	.....	.....	.....	"
87.1	.....	.....	.....	"
108.3	.....	.....	.....	"
51.5	.....	.....	.....	"
59.8	.....	.....	.....	"
151.0	.....	.....	.....	"
293.1	.....	.....	.....	"
146.4	5-in. Con.	146.4	.....	"
149.4	5-in. "	153.8	.....	"
47.9	.....	.....	.....	"
64.6	.....	.....	.....	"
29.1	.....	.....	.....	"
56.0	.....	.....	.....	"
32.6	.....	.....	.....	"
512.0	.....	.....	.....	"
102.7	5-in. Con.	35.0	.....	"
68.5	.....	.....	.....	"
127.0	5-in. Con.	131.9	.....	"
5.6	.....	.....	.....	"
26.8	5-in. Con.	30.8	.....	"
60.3	.....	.....	.....	"
50.9	.....	.....	.....	"
56.6	.....	.....	.....	"
105.0	.....	.....	.....	"
96.9	.....	.....	.....	"
50.2	.....	.....	.....	"
50.8	.....	.....	.....	"

PRIVATE CONCRETE SIDEWALKS—*Continued.*

No.	Street.	From.	To.	Side.	Width, Feet.
56	Searth .....	Chestnut Park Rd.	142.2 ft. north .....	West ..	4½
57	Spadina .....	King .....	128.5 ft. north .....	West ..	11.5-20.2
58	Sylvan .....	Havelock .....	135 ft. west .....	North ..	4½
59	Strange .....	Queen .....	91.8 ft. south .....	East ..	4
60	Sheppard .....	110 ft. n. Adelaide .....	64.6 ft. further n .....	West ..	9.8
61	Thorold .....	Opp. Nos. 56-64 .....	.....	North ..	5
62	Victoria .....	Queen .....	104 ft. south .....	West ..	11.6
63	Welliesley .....	Bleecker .....	63 ft. west .....	South ..	20.5
64	Waverley .....	Queen .....	North City Limits .....	East ..	5
65	Yorkville .....	Point w. of Yonge .....	241.9 ft. e. Avenue Road .....	South ..	6
66	York .....	Front .....	Station .....	West ..	10.9-11

## PRIVATE BRICK SIDEWALK.

1Roxborough .....	786 ft. e. of Yonge .....	42 ft. further east .....	North ..	4
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## CONCRETE SIDEWALKS.

Street.	From.	To.	Side.	Width, Feet.
Aberdeen .....	Ontario .....	222 feet east .....	North ..	4
Albert .....	Elizabeth .....	Chestnut .....	South ..	6
Albert .....	James .....	Chestnut .....	North ..	6
Albert .....	Teraulay .....	Elizabeth .....	South ..	6
Argyle .....	Dundas .....	Givens .....	South ..	5
Argyle .....	Dundas .....	Givens .....	North ..	5
Allan .....	Broadview .....	Bolton .....	South ..	5
Amelia .....	Sumach .....	Sackville .....	North ..	5
Amelia .....	Metcalf .....	Parliament .....	South ..	5
Amelia .....	Sackville .....	Metcalf .....	South ..	5
Albany .....	Wells .....	Dupont .....	East ..	5
Alma .....	Dufferin .....	Gladstone .....	South ..	4½
Allan .....	Broadview .....	Bolton .....	North ..	5
Augusta .....	Bellevue Place .....	N. S. Denison Sq. ....	West ..	5

PRIVATE CONCRETE SIDEWALKS—*Continued.*

Length. Feet.	Curb.		Completed.	Contractor.
	Class.	Length. Feet.		
160.2	.....	.....	.....	Private.
128.5	.....	.....	.....	"
135.0	5-in. Con.	135.0	.....	"
91.8	5-in. Con.	91.8	.....	"
64.6	5-in. Con.	64.6	.....	"
127.4	.....	.....	.....	"
104.0	.....	.....	.....	"
73.0	.....	.....	.....	"
200.0	5-in. Con.	200.0	.....	"
1,001.2	.....	.....	.....	"
145.0	.....	.....	.....	"
8,496.1		2,352.0		

## PRIVATE BRICK SIDEWALK.

42	.....	.....	.....	.....	Private.
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## CONCRETE SIDEWALKS.

Length in feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
223.7	.....	.....	Oct. 17, 1908	Queen City Con. Pav. Co.
182.2	.....	.....	Oct. 19, 1908	Day labor.
827.6	.....	.....	May 16, 1908	"
339.5	.....	.....	June 1, 1908	Grant Contracting Co.
290.3	5-in. concrete	291.5	Sept. 29, 1908	" " "
299.7	"	299.7	June 17, 1908	Crescent Con. Pav. Co.
830.0	"	19.4	May 12, 1908	A. J. Penberthy.
697.0	6-in. concrete	38.0	April 25, 1908	Reeve Con. Pav. Co.
324.5	.....	.....	April 27, 1908	" " "
404.8	.....	.....	April 24, 1908	" " "
1,100.5	.....	.....	Aug. 17, 1908	" " "
371.1	5-in. concrete	352.2	July 3, 1908	Day labor.
827.0	.....	.....	Aug. 5, 1908	W. R. Payne.
168.0	.....	.....	June 20, 1908	Day labor, order of Council

CONCRETE SIDEWALKS—*Continued.*

Street.	From	To.	Side.	Width Feet.
Baldwin.....	Spadina .....	Kensington.....	South .....	5
**Bathurst.....	Bloor.....	Follis.....	West.....	6
Berkeley.....	Queen .....	Duke.....	East.....	5
Bathurst.....	Adelaide .....	Farley .....	East.....	6
Barton.....	125 feet east of Palmerston.....	Bathurst.....	South .....	5
Bloor .....	Manning.....	Clinton.....	South .....	6
Bright.....	King .....	Queen .....	East.....	4
Bright.....	King .....	Queen .....	West.....	4
Bedford.....	Dupont.....	246 feet south.....	West.....	5
Bond.....	Gould.....	Wilton.....	East.....	5
Berkeley.....	Sydenham.....	Wilton.....	East.....	5
Berkeley.....	Sydenham.....	Wilton.....	West.....	5
Brock.....	Dundas.....	Frankish.....	East.....	5
Brunswick.....	Bloor.....	Lowther .....	East.....	5
Bellwoods .....	285½ ft. n. of Queen	520 ft. s. of Arthur.....	West.....	4½
Bond.....	Queen .....	Shuter .....	West.....	5
Bloor .....	Brock.....	St. Clares.....	South .....	5
Berti.....	Richmond .....	115 feet north.....	East.....	5
Britain.....	Sherbourne .....	George .....	South .....	5
Broadview.....	Simpson .....	Withrow .....	East.....	6
Balmoral.....	Avenue Road .....	Poplar Plains Road.....	North .....	5
Brock .....	Muir.....	Chesley .....	East .....	5
Bean .....	252 ft. e. of Glen Rd.	176 feet north.....	West.....	5
Bellair.....	Cumberland .....	Yorkville.....	East .....	3½
Bellair.....	Cumberland .....	Bloor .....	East.....	4
Bellair.....	Cumberland .....	Bloor .....	West.....	4
Bismarck.....	Park Road .....	East end .....	North .....	4
Brock .....	Frankish.....	Middleton .....	East .....	5
Barton .....	Christie .....	Manning .....	North .....	5
Bathurst .....	Bloor .....	Dupont .....	East .....	6
Boustead .....	650 ft. west Ronces- valles.	Indian Rd .....	South .....	5
Bernard.....	St. George .....	Admiral Rd .....	South .....	5
Borden .....	Ulster .....	Bloor .....	East .....	5
Broadview.....	29 ft. n. Gerrard.....	1,000 ft. north .....	West .....	6
Beaconsfield .....	Dundas .....	Afton .....	East .....	5
Beatrice .....	922 ft. n. of n.e. cor. College.	57 ft. further north.....	West .....	4
Collier .....	100 ft. e. Yonge.....	Park Rd .....	South .....	5
College .....	Markham .....	Clinton .....	South .....	6
Crescent .....	Searth .....	Park Rd .....	South .....	4
College .....	Huron .....	368 ft. west .....	South .....	6
Clinton .....	Bloor .....	320 ft. north .....	West .....	5
Cross .....	Gladstone .....	Beaconsfield .....	South .....	4

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
436.6			July 18, 1908	W. R. Payne.
250.6			July 23, 1908	Crescent Con. Pav. Co.
773.1			Aug. 20, 1908	A. J. Penberthy.
476.4			Aug. 15, 1908	Day labor.
436.5	5-in. concrete	407.2	Aug. 27, 1908	Reeve Con. Pav. Co.
282.0			Aug. 31, 1908	" " "
510.4			Sept. 9, 1908	A. Johnson.
520.0			Sept. 9, 1908	"
257.8	5-in. concrete	251.6	Sept. 9, 1908	A. Gardner & Co.
607.4	"	611.4	June 5, 1908	W. R. Payne.
926.7	"	913.2	July 2, 1908	Queen City Con. Pav. Co.
917.7	"	915.3	July 13, 1908	" " "
891.4	"	904.9	Sept. 15, 1908	Reeve Con. Pav. Co.
750.6			Sept. 14, 1908	Ontario Con. Pav. Co.
1,060.0			June 29, 1908	J. J. Thompson.
556.7			Oct. 2, 1908	Ontario Con. Pav. Co.
556.0			Oct. 3, 1908	Day labor, Order of Coun.
115.0			Oct. 2, 1908	Ontario Con. Pav. Co.
676.5	5-in. concrete	643.0	Oct. 17, 1908	Queen City Con. Pav. Co.
1,057.0			May 1, 1908	Ontario Con. Pav. Co.
608.0			May 19, 1908	Day labor.
282.2		53.1	June 12, 1908	W. R. Payne.
218.0			Oct. 9, 1908	A. Gardner & Co.
265.2	5-in. concrete	265.2	Oct. 21, 1908	Queen City Con. Pav. Co.
287.0			Oct. 20, 1908	" " "
279.0			Oct. 22, 1908	" " "
495.7			June 12, 1908	A. Gardner & Co.
407.0	5-in. concrete	432.0	June 25, 1908	Ontario Con. Pav. Co.
616.6			June 18, 1908	W. R. Payne.
2,925.6	6-in. concrete	9.5	July 22, 1908	Crescent Con. Pav. Co.
419.8	5-in.	419.8	July 7, 1908	Grant Contracting Co.
312.5			June 29, 1908	W. R. Payne.
1,938.3	5-in. concrete	1,922.3	Oct. 29, 1908	Crescent Con. Pav. Co.
1,010.0			Oct. 24, 1908	Day labor, Order of Coun.
948.5	5-in. concrete	936.5	Nov. 3, 1908	W. R. Payne.
56.8	"	56.8	Nov. 19, 1908	Day labor, Order of Coun.
577.0			Oct. 22, 1908	Queen City Con. Pav. Co.
1,244.5	5-in. concrete	110.4	June 8, 1908	Ontario Con. Pav. Co.
217.3			Oct. 21, 1908	Day labor.
290.4			Oct. 20, 1908	"
408.0		407.0	Aug. 4, 1908	{ Godson Cont'g Co—enrb. Day labor—walk.
365.9	5-in. concrete	26.0	Oct. 15, 1908	J. J. Thomson.

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet
Cinder . . . . .	Crawford . . . . .	Montrose . . . . .	South . . . . .	4
Constance . . . . .	Roncesvalles . . . . .	Sunnyside . . . . .	North . . . . .	5
Constance . . . . .	Roncesvalles . . . . .	Sunnyside . . . . .	South . . . . .	5
Carr . . . . .	Esther . . . . .	Ryerson . . . . .	South . . . . .	5
College . . . . .	22 ft. w. Manning . . . . .	Montrose . . . . .	North . . . . .	6
Chestnut . . . . .	62 ft. 3 in. n. Agnes . . . . .	Hayter . . . . .	East . . . . .	5
Chestnut . . . . .	Elm . . . . .	136 ft. south . . . . .	West . . . . .	5
Campbell . . . . .	Royce . . . . .	Antler . . . . .	West . . . . .	5
Carlaw . . . . .	Bain . . . . .	Dingwall . . . . .	East . . . . .	5
Clarence Sq . . . . .	Spadina . . . . .	Wellington . . . . .	S. & E. . . . .	5
College . . . . .	Roncesvalles . . . . .	Sorauren . . . . .	South . . . . .	5
Crocker . . . . .	Bellwoods . . . . .	East end . . . . .	North . . . . .	4
Concord . . . . .	Bloor . . . . .	Hallam . . . . .	East . . . . .	5
Castle . . . . .	Kendall . . . . .	142 ft. east . . . . .	North . . . . .	5
Cinder . . . . .	Crawford . . . . .	Montrose . . . . .	North . . . . .	4
Czar . . . . .	Yonge . . . . .	North St . . . . .	South . . . . .	5
Clarke . . . . .	Grant . . . . .	Bolton . . . . .	North . . . . .	4
Clarke . . . . .	Grant . . . . .	Bolton . . . . .	South . . . . .	4
Carr . . . . .	Ryerson . . . . .	West end . . . . .	South . . . . .	4
Cross . . . . .	Gladstone . . . . .	Beaconsfield . . . . .	North . . . . .	4
Coxwell . . . . .	Queen . . . . .	200 ft. north . . . . .	West . . . . .	5
Clifford . . . . .	Strachan . . . . .	Stanley Park . . . . .	North . . . . .	4
Casimir . . . . .	St. Patrick . . . . .	North end . . . . .	West . . . . .	4
Carlaw . . . . .	Queen . . . . .	Eastern . . . . .	East . . . . .	5
College . . . . .	Sheridan . . . . .	Lansdowne . . . . .	North . . . . .	5
Commercial Lane . . . . .	Jarvis . . . . .	Francis . . . . .	South . . . . .	4
Curzon . . . . .	Queen . . . . .	Sproatt . . . . .	West . . . . .	5
**Conduit . . . . .	Dundas . . . . .	West end . . . . .	South . . . . .	5
Defoe . . . . .	Shaw . . . . .	Niagara . . . . .	North . . . . .	4
Dublin . . . . .	St. Helens . . . . .	West end . . . . .	South . . . . .	4
Dublin . . . . .	St. Helens . . . . .	West end . . . . .	North . . . . .	4
Dora . . . . .	St. Helens . . . . .	West end . . . . .	South . . . . .	4
Dresden . . . . .	Pape . . . . .	Carlaw . . . . .	South . . . . .	5
Dundas . . . . .	Ossington . . . . .	Rusholme . . . . .	North . . . . .	6
Davenport . . . . .	Dupont . . . . .	Bedford . . . . .	E. & N. . . . .	5
Davies . . . . .	Queen . . . . .	Matilda . . . . .	East . . . . .	4½
Dresden . . . . .	Pape . . . . .	Carlaw . . . . .	North . . . . .	5
Dearbourne . . . . .	Broadview . . . . .	Bowden . . . . .	South . . . . .	5
Dundas . . . . .	Lisgar . . . . .	Dufferin . . . . .	South . . . . .	6
Dufferin . . . . .	Bloor . . . . .	416 ft. south . . . . .	West . . . . .	5
Dupont . . . . .	Kendall . . . . .	Howland . . . . .	North . . . . .	5
Dalhousie . . . . .	Shuter . . . . .	Gould . . . . .	East . . . . .	5
Dundas . . . . .	Rusholme . . . . .	Lansdowne . . . . .	North . . . . .	6
Division . . . . .	Huron . . . . .	Spadina . . . . .	South . . . . .	5

## CONCRETE SIDEWALKS—Continued.

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
262.4	5-in. concrete . . .	255.4	July 24, 1908	W. R. Payne.
572.0	" . . .	564.0	Oct. 16, 1908	Day labor.
572.3	" . . .	564.3	Oct. 15, 1908	"
472.9	. . . . .	. . . . .	July 3, 1908	W. R. Payne.
1,423.6	5-in. concrete . . .	109.0	June 23, 1908	Stinson & Grummett.
1,173.6	" . . .	42.3	Oct. 3, 1908	Crescent Con. Pav. Co.
139.4	. . . . .	. . . . .	Sept. 2, 1908	Day labor.
623.1	. . . . .	. . . . .	Sept. 9, 1908	Crescent Con. Pav. Co.
250.3	5-in. concrete . . .	239.5	Aug. 28, 1908	Queen City Con. Pav. Co.
545.9	" . . .	521.6	June 20, 1908	Excelsior Constructing & Paving Co.
1,372.8	. . . . .	. . . . .	Sept. 2, 1908	Ontario Con. Pav. Co.
433.9	. . . . .	. . . . .	Aug. 19, 1908	Day labor.
2,181.2	. . . . .	. . . . .	June 3, 1908	T. E. McMurray.
157.6	5-in. concrete . . .	162.1	May 16, 1908	Crescent Con. Pav. Co.
246.6	" . . .	237.6	July 22, 1908	W. R. Payne.
650.9	. . . . .	. . . . .	May 12, 1908	Crescent Con. Pav. Co.
428.2	. . . . .	. . . . .	July 9, 1908	W. R. Payne.
462.2	5-in. concrete . . .	21.0	July 9, 1908	"
160.0	" . . .	150.0	July 13, 1908	Reeve Gon. Pav. Co.
367.6	" . . .	26.0	Oct. 16, 1908	J. J. Thomson.
205.8	" . . .	221.8	July 9, 1908	A. Gardner & Co.
482.2	" . . .	482.2	June 30, 1908	Excelsior Constructing & Paving Co.
193.4	. . . . .	. . . . .	June 27, 1908	Reeve Con. Pav. Co.
953.8	. . . . .	. . . . .	June 1, 1908	A. Gardner & Co.
1,384.6	. . . . .	. . . . .	Nov. 12, 1908	E. H. Schoales.
125.6	5-in. concrete . . .	125.6	Oct. 27, 1908	Queen City Con. Pav. Co.
1,938.0	. . . . .	. . . . .	Nov. 26, 1908	A. Gardner & Co.
74.0	5-in. concrete . . .	78.0	May 5, 1908	R. A. Rogers & Co.
1,681.6	. . . . .	. . . . .	Aug. 6, 1908	Reeve Con. Pav. Co.
276.0	5-in. concrete . . .	276.0	April 17, 1908	W. R. Payne.
276.0	" . . .	276.0	April 16, 1908	"
278.5	" . . .	278.5	April 23, 1908	"
613.0	" . . .	600.0	May 2, 1908	Queen City Con. Pav. Co.
1,463.5	. . . . .	. . . . .	Sept. 5, 1908	W. R. Payne.
836.7	5-in. concrete . . .	13.0	April 29, 1908	Reeve Con. Pav. Co.
396.5	6-in. concrete . . .	25.3	April 16, 1908	Day labor.
612.8	5-in. concrete . . .	601.2	Sept. 21, 1908	Ontario Con. Pav. Co.
1,151.2	" . . .	1,146.2	Sept. 23, 1908	Queen City Con. Pav. Co.
1,141.0	. . . . .	. . . . .	Sept. 26, 1908	W. R. Payne.
423.0	5-in. concrete . . .	416.0	Oct. 2, 1908	Day labor (order of Council)
634.9	. . . . .	. . . . .	Oct. 7, 1908	Day labor.
1,172.7	5-in. concrete . . .	1,115.0	May 27, 1908	Excelsior Con. & Pav. Co.
3,287.0	. . . . .	. . . . .	Oct. 10, 1908	W. R. Payne.
442.0	. . . . .	. . . . .	June 10, 1908	"

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet.
Dovercourt .....	Bloor .....	Van Horne .....	East .....	5
Duncan .....	84 ft. n. of Adelaide	Richmond .....	West .....	5
Dufferin .....	King .....	Queen .....	East .....	5
Denison .....	Queen .....	Bellevue Place .....	West .....	5
Dewson .....	Ossington .....	Delaware .....	South .....	5
Dovercourt .....	Shanly .....	Van Horne .....	West .....	5
Dagmar .....	275 ft. e. of Pape	Brooklyn .....	South .....	5
Dufferin .....	College .....	Sylvan .....	East .....	5
Doel .....	Leslie .....	Curzon .....	North .....	4
Davenport .....	Bedford .....	635 ft. w. of Avenue Rd.	North .....	5
Emerson .....	495 n. of Wallace	Lappin .....	West .....	5
Empress Crescent .....	Jameson .....	Dunn .....	South .....	5
Emerson .....	Wallace .....	495 ft. north .....	West .....	5
Elm .....	Glen Road .....	252 ft. east .....	North .....	5
Elizabeth .....	Queen .....	Edward .....	West .....	6
Euclid .....	Arthur .....	College .....	East .....	5
Empress Crescent .....	Jameson .....	Dunn .....	North .....	5
Elizabeth .....	s.s. first lane n. of College.	Grenville .....	East .....	5
Eastern .....	Broadview .....	Morse .....	North .....	5
Emily .....	King .....	Wellington .....	East .....	4
Emily .....	King .....	Wellington .....	West .....	4
Evans .....	Clinton .....	West end .....	South .....	4
Eden Place .....	Bathurst .....	East end .....	North .....	4
Emerson .....	434 ft. n. of Bloor	Paton Road .....	East .....	5
Emerson .....	Paton Road .....	Wallace .....	West .....	5
Eastern .....	Carlaw .....	Morse .....	North .....	5
Empress Cres. ....	Jameson .....	Dowling .....	North .....	5
Evans .....	Clinton .....	247 ft. west .....	North .....	4
Foxbar .....	Avenue Rd .....	St. Clair .....	N. & W. ....	5
Front .....	91 ft. w. of Yonge	Bay .....	North .....	10-11½
Forrest Hill .....	St. Clair .....	Heath .....	East .....	5
Forrest Hill .....	Heath .....	Lonsdale .....	East .....	5
Follis .....	Palmerston .....	Manning .....	North .....	5
Fraser .....	Liberty .....	Rly. tracks .....	East .....	5
Fenwick .....	Danforth .....	600 ft. south .....	West .....	4
Fenwick .....	Danforth .....	600 ft. south .....	East .....	4
Farley .....	Bathurst .....	Tecumseth .....	North .....	5
Frederick .....	42 ft. n. of King .....	Duke .....	East .....	5
Fern .....	Roncesvalles .....	Sunnyside .....	North .....	5
Fern .....	Roncesvalles .....	Sunnyside .....	South .....	5
First .....	De Grassi .....	Bolton .....	South .....	5
Front .....	Cherry .....	Trinity .....	South .....	5
Front .....	Princess .....	Sherbourne .....	North .....	5

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in feet.		
3,085.2			June 29, 1908	T. E. McMurray.
306.1			July 3, 1908	Crescent Con. Pav. Co.
1,137.7			May 16, 1908	" "
1,728.3	6-in. concrete	96.0	June 15, 1908	" "
649.5	"	27.3	July 21, 1908	Const'g & Pav. Co.
1,988.3			July 13, 1908	Ontario Con. Pav. Co.
175.8			July 3, 1908	Day labor.
707.1	5-in. concrete	652.2	Nov. 14, 1908	William Bushell.
287.5	"	270.5	Nov. 12, 1908	Queen City Con. Pav. Co.
189.5			Nov. 14, 1908	Day labor.
443.5	5-in. concrete	427.7	Oct. 30, 1908	Excelsior Con. & Pav. Co.
764.0	"	773.0	May 13, 1908	W. R. Payne.
495.0	"	495.0	May 12, 1908	Grant Contracting Co.
280.0	"	256.0	Oct. 9, 1908	A. Gardner & Co.
1,581.6			May 22, 1908	" "
1,504.4			May 23, 1908	Grant Contracting Co.
785.6	5-in. concrete	790.1	May 13, 1908	W. R. Payne.
116.0			Oct. 7, 1908	Day labor.
2,171.9	5-in. concrete	2,200.9	Oct. 5, 1908	Excelsior Con. & Pav. Co.
437.0	"	3.0	Sept. 17, 1908	Crescent Con. Pav. Co.
436.9			Sept. 16, 1908	" "
291.3	5-in. concrete	278.0	June 5, 1908	" "
335.4	"	335.4	July 25, 1908	W. R. Payne.
368.3	"	368.3	June 19, 1908	Const'g & Pav. Co.
617.0	"	621.5	June 12, 1908	Crescent Con. Pav. Co.
316.7	"	66.5	Oct. 23, 1908	Excelsior Con. & Pav. Co.
858.2			May 28, 1908	W. R. Payne.
273.0	5 in. concrete	262.0	Nov. 10, 1908	Grant Con. Co.—walk. (Barber A. Pv. Co.—curb.)
1,266.8	"	1,258.8	July 24, 1908	Day labor, order of Council
341.1	"	388.7	June 9, 1908	A. Gardner & Co.
738.9	"	738.0	Sept. 9, 1908	Excelsior Con. & Pav. Co.
682.6	"	682.6	Aug. 29, 1908	" "
624.7	"	596.4	June 27, 1908	W. R. Payne.
772.7			Oct. 7, 1908	Crescent Con. & Pav. Co.
600.0			Oct. 16, 1908	A. Johnson.
639.0			Oct. 16, 1908	"
648.0	5 in. concrete	25.3	Oct. 10, 1908	Crescent Con. & Pav. Co.
168.0			May 21, 1908	Grant Contracting Co.
548.2	5 in. concrete	541.2	Nov. 2, 1908	William Bushell.
548.3	"	541.3	Oct. 30, 1908	"
218.9			July 2, 1908	Day labor.
599.6			Aug. 10, 1908	"
274.8			Aug. 12, 1908	"

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet.
Front.....	Trinity .....	Cherry .....	North ..	5
Gladstone.....	Dundas .....	Cross .....	East ..	5
Gerrard.....	Logan .....	Pape .....	South ..	5
Geoffrey.....	Roncesvalles .....	Sunnyside .....	North ..	5
Geoffrey.....	Roncesvalles .....	Sunnyside .....	South ..	5
Graham Pl.....	McGee .....	East end .....	North ..	4
Golden.....	Dundas .....	Silver .....	East ..	4½
Galt.....	Gerrard .....	234 ft. south .....	East ..	4
Grange Road.....	Beverley .....	McCaul .....	North ..	5
Geoffrey.....	Sorauren .....	Roncesvalles .....	North ..	5
Givens.....	Halton .....	Bruce .....	East ..	5
Grandview.....	Logan .....	643 ft. west .....	North ..	4
Grandview.....	Logan .....	643 ft. west .....	South ..	4
Gladstone.....	Dundas .....	336 ft. north .....	East ..	5
Glen Rd.....	South Drive .....	Bridge .....	West ..	6
Gloucester.....	Yonge .....	Church .....	North ..	5
Geneva.....	Sumach .....	East end .....	North ..	4
Grace.....	1,744 ft. n. of n.e. cor. of College.	160 ft. further n. ....	East ..	5
Grace *.....	1,494 ft. n. of n.e. cor. of College.	250 ft. further n. ....	East ..	5
Grace.....	1,744 ft. n. of n.e. cor. of College.	160 ft. further n. ....	West ..	5
Grace.....	1,494 ft. n. of n.e. cor. of College.	250 ft. further n. ....	West ..	5
Gloucester.....	Yonge .....	Church .....	South ..	5
Gladstone.....	Trafalgar .....	Dundas .....	West ..	5
Gerrard.....	Parliament .....	Sackville .....	North ..	6
George.....	Duke .....	Duchess .....	East ..	6
Glen Road.....	Howard .....	Bridge .....	West ..	5
Givens.....	Argyle .....	Halton .....	West ..	5
Huron.....	College .....	Division .....	West ..	5
Havelock.....	160 ft. n. of College	Dewson .....	East ..	5
Hamburg.....	Bloor .....	Shanly .....	East ..	5
Harbord.....	Spadina .....	Huron .....	South ..	5
Harbord.....	Manning .....	Clinton .....	South ..	5
Havelock.....	Lindsay .....	27 ft. n. of Sylvan	West ..	5
Hickson.....	Brock .....	St. Clavens .....	North ..	4½
High Park Boulevard	Roncesvalles .....	Sunnyside .....	South ..	6
Hallam.....	Westmoreland .....	Hamburg .....	North ..	5
Howard.....	Parliament .....	Glen Road .....	North ..	6
Hampton.....	Hogarth .....	Danforth .....	West ..	5
Harcourt.....	Carlaw .....	Pape .....	North ..	5
Howland.....	Barton .....	Wells .....	West ..	5
Hayter.....	La Plante .....	Teranley .....	South ..	5
Hogarth.....	Broadview .....	340 feet east .....	South ..	5

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
514.9			July 16, 1908	A. Johnson.
844.5			Oct. 29, 1908	J. J. Thomson.
1,328.3			Oct. 1, 1908	A. Johnson.
561.3	5 in. concrete	562.8	July 24, 1908	Excelsior Con. & Pav. Co.
564.0	"	564.0	Aug. 20, 1908	" "
138.3			Oct. 17, 1908	A. Gardner & Co.
249.5			Oct. 13, 1908	Excelsior Con. & Pav. Co.
239.5	5 in. concrete	233.2	Sept. 28, 1908	Ontario Concrete Pav. Co.
616.8	"	626.0	July 25, 1908	" "
1,384.0			July 24, 1908	Crescent Con. Pav. Co.
953.5	5 in. concrete	947.5	July 9, 1908	Ontario Con. Pav. Co.
643.6			Sept. 11, 1908	Queen City Con. Pav. Co.
644.7			Sept. 9, 1908	" "
322.6			Sept. 18, 1908	W. R. Payne.
253.0			June 29, 1908	Crescent Con. & Pav. Co.
955.7	5 in. concrete	937.4	Aug. 4, 1908	Queen City Con. Pav. Co.
414.6	"	27.5	Aug. 8, 1908	A. Johnson.
160.6			July 28, 1908	Constructing & Pav. Co.
250.0		250.0	July 27, 1908	" "
160.0			Aug. 1, 1908	" "
250.2		250.2	Aug. 1, 1908	" "
944.6	5 in. concrete	941.0	July 27, 1908	Queen City Con. Pav. Co.
1,046.0			June 22, 1908	Ontario Concrete Pav. Co.
785.3			May 6, 1908	Day labor.
425.8			May 16, 1908	Grant Contracting Co.
417.7			May 2, 1908	" "
482.3	5-in. concrete	485.2	May 16, 1908	W. R. Payne.
258.5			May 20, 1908	Crescent Con. Pav. Co.
766.5	5-in. concrete	771.0	May 15, 1908	J. J. Thompson.
1,137.0		1,141.0	July 25, 1908	Grant Contracting Co.
501.3	5-in. concrete	467.8	May 28, 1908	Crescent Con. Pav. Co.
274.0	"	257.4	May 29, 1908	Leach Concrete Co.
374.2			Sept. 19, 1908	Crescent Con. Pav. Co.
643.7	5-in. concrete	628.7	July 31, 1908	W. R. Payne.
567.3			Aug. 24, 1908	Ontario Con. Pav. Co.
938.4	6-in. concrete	3.0	July 2, 1908	Grant Contracting Co.
1,007.9			Sept. 1, 1908	A. J. Pemberthy.
1,131.7	5-in. concrete	1,132.7	Sept. 4, 1908	A. Gardner & Co.
613.3	"	602.0	Aug. 25, 1908	" "
776.5			Sept. 16, 1908	Grant Contracting Co.
185.6			Sept. 26, 1908	A. J. Pemberthy.
344.9			Sept. 25, 1908	Queen City Con. Pav. Co.

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet.
Hayter .....	Yonge .....	Chestnut .....	North ..	5
Hamilton .....	Kintyre .....	Gerrard .....	West ..	4
Howard .....	Ontario .....	Rose .....	South ..	5
Havelock .....	Bloor .....	N. s. Hepbourne (Prod.) .....	West ..	5
Havelock .....	757 ft. s. of Bloor .....	213 ft. 3 in. further s .....	West ..	5
Hallam .....	Dovercourt .....	Westmoreland .....	North ..	5
Harrison .....	Ossington .....	Lakeview .....	South ..	5
Hamburg .....	Shanly .....	Hallam .....	East ..	5
Hamburg .....	Hallam .....	Van Horne .....	West ..	5
Howard Park Ave ..	Dundas .....	Roncevalles .....	South ..	5
Hickory .....	St. Patrick .....	North end .....	West ..	4
Hallam .....	Dovercourt .....	Delaware .....	South ..	5
Huntley .....	120 ft. n. of Elm .....	South Drive .....	West ..	5
Huntley .....	Elm .....	120 feet north .....	West ..	5
Hampton .....	Sparkhall .....	Hogarth .....	East ..	5
Harcourt .....	Pape .....	Carlaw .....	South ..	5
Iroquois .....	Manitou .....	St. Andrews .....	South ..	6
James .....	Queen .....	Albert .....	West ..	6
John .....	King .....	Wellington .....	West ..	6
Jones .....	Gerrard .....	G. T. R. .....	East ..	5
John .....	King .....	Wellington .....	East ..	6
Jones .....	G. T. R. .....	N. s. Hazelwood (Prod.) .....	East ..	5
John .....	Wellington .....	Front .....	West ..	6
Knox .....	Eastern .....	Queen .....	West ..	5
King .....	Spadina .....	Bathurst .....	South ..	6
King .....	Atlantic .....	165 ft. east .....	South ..	6
King .....	Mowat .....	108 ft. east .....	South ..	6
King .....	Dufferin .....	Mowat .....	South ..	6
King .....	133 ft. e. of Strachan .....	Stanley Terrace .....	North ..	6
Lynd .....	College .....	Neepawa .....	West ..	5
Lake Front .....	Woodbine .....	746 ft. east .....	North ..	5
Langley .....	1,272 ft. east of Logan .....	Broadview .....	North ..	5
Lappin .....	Emerson .....	Lansdowne .....	North ..	5
Lennox .....	Borden .....	Bathurst .....	North ..	4
Lennox .....	Borden .....	Bathurst .....	South ..	4
Lindsay .....	Havelock .....	Gladstone .....	North ..	5
Lindsay .....	Havelock .....	Gladstone .....	South ..	5
Lewis .....	Queen .....	Eastern .....	West ..	5
Louisa .....	Elizabeth .....	Chestnut .....	North ..	5
Louisa .....	Elizabeth .....	Chestnut .....	South ..	5
Leslie .....	Gerrard .....	N. s. Harriett .....	West ..	5
Lee .....	Queen .....	North City limits .....	West ..	4
Lisgar North .....	Afton .....	MacKenzie Cres. .....	East ..	5

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
1,262.3			Sept. 28, 1908	A. J. Pemberthy.
1,827.5			Oct. 13, 1908	" "
312.5			Oct. 19, 1908	Queen City Con. Pav. Co.
757.0			Oct. 19, 1908	W. R. Payne.
213.3			Oct. 19, 1908	" "
278.3			July 4, 1908	T. E. McMurray.
461.4			May 22, 1908	W. R. Payne.
1,062.8	5-in. concrete	1,049.8	April 29, 1908	Excelsior Con. & Pav. Co.
945.5	"	912.0	May 4, 1908	" " "
707.7			May 8, 1908	Dominion Con. Pav. Co.
201.6	5-in. concrete	201.6	July 3, 1908	Reeve Con. Pav. Co.
286.0		290.0	July 31, 1908	Day labor.
467.3			Aug. 12, 1908	Crescent Con. Pav. Co.
147.5			Aug. 12, 1908	" " "
672.1	5-in. concrete	673.1	Sept. 9, 1908	Reeve Con. Pav. Co.
613.3	"	602.0	Aug. 25, 1908	A. Gardner & Co.
1,730.8			Aug. 26, 1908	Day labor.
339.6	6-in. concrete	398.6	May 6, 1908	Day labor, order of Council
434.2	5-in. concrete	435.5	May 27, 1908	Leach Concrete Co.
987.8	"	989.0	May 2, 1908	Enterprise Contract'g Co.
447.1	"	467.2	May 27, 1908	Leach Concrete Co.
2,569.9	"	2,601.9	Aug. 26, 1908	Queen City Con. Pav. Co.
374.7	"	20.0	July 27, 1908	Ontario Con. Pav. Co.
582.0	5-in. concrete	582.0	Sept. 17, 1908	Queen City Con. Pav. Co.
1,741.2			May 28, 1908	Day labor.
184.0			Aug. 25, 1908	W. R. Payne.
126.5			Aug. 26, 1908	"
320.0			June 29, 1908	Day labor, Order of Coun.
298.0		411.0	June 20, 1908	Crescent Con. Pav. Co.
529.9	5-in. concrete	411.2	Oct. 10, 1908	Day labor, Order of Coun.
722.1			May 9, 1908	A. Johnson.
659.0			Aug. 20, 1908	"
509.6	5-in. concrete	498.6	June 10, 1908	Universal Paving Co.
577.3			Oct. 10, 1908	Grant Contracting Co.
577.6			Oct. 10, 1908	" "
384.2			Nov. 7, 1908	Day labor.
406.0			Nov. 6, 1908	"
951.6			May 29, 1908	Queen City Con. Pav. Co.
184.3			June 8, 1908	Dominion Con. Pav. Co.
184.0			June 6, 1908	" "
736.3	5-in. concrete	740.8	Nov. 2, 1908	Day labor.
198.0	"	198.0	June 23, 1908	E. H. Schoales.
495.7	"	500.2	Sept. 3, 1908	Crescent Con. Pav. Co.

## CONCRETE SIDEWALKS—Continued.

Street.	From.	To.	Side.	Width Feet.
Leonard.....	Nassau .....	Bellevue .....	West .....	5
Logan.....	Tracks.....	188 ft. n. of Natalie	East .....	5
Lindsay.....	Dufferin .....	Brock .....	North .....	4
Moss Park Place .....	Sherbourne .....	West end .....	South .....	5
Marion.....	Roncesvalles .....	Sunnyside .....	South .....	5
Marion.....	Roncesvalles .....	Sunnyside .....	North .....	5
Marmaduke.....	Roncesvalles .....	Sunnyside .....	South .....	5
Marmaduke.....	Roncesvalles .....	Sunnyside .....	North .....	5
Mill .....	Trinity .....	Cherry .....	North .....	5
Montrose .....	Arthur .....	Cinder .....	West .....	5
Montrose .....	Arthur .....	College .....	East .....	5
Muir .....	200 ft. e. of Sheridan	Dufferin .....	South .....	4
Mercer.....	John .....	Peter .....	North .....	5
Markham .....	Arthur .....	College .....	West .....	5
Muir .....	Brock .....	Sheridan .....	South .....	4
Margueretta .....	College .....	Bloor .....	East .....	5
Margueretta .....	College .....	Bloor .....	West .....	5
Major.....	Bloor .....	Lowther .....	East .....	5
Major.....	Bloor .....	Lowther .....	West .....	5
Maitland .....	Yonge .....	Church .....	South .....	5
Macpherson .....	Yonge .....	Avenue Rd .....	North .....	5
Mutual .....	167 ft. n. of Carlton	75 ft. s. of Maitland	East .....	4
Manning .....	Robinson .....	Arthur .....	East .....	5
Manning .....	Robinson .....	Arthur .....	West .....	5
Manning .....	Arthur .....	Plymouth .....	West .....	5
Manning .....	Mansfield .....	Henderson .....	West .....	5
Mansfield .....	Manning .....	Clarendont .....	South .....	5
Mutual .....	167 ft. n. of Carlton	Alexander .....	West .....	4
Manning .....	Plymouth .....	Mansfield .....	West .....	5
Montrose .....	Sully Cres .....	Cinder .....	West .....	5
Mackenzie Cres .....	Beaconsfield .....	North Lisgar .....	North .....	4
Mackenzie Cres .....	Beaconsfield .....	North Lisgar .....	South .....	4
Niagara .....	Bathurst .....	Portland .....	North .....	5
Niagara .....	140 ft. s. of King .....	Wellington .....	West .....	5
Northumberland .....	Concord .....	Ossington .....	North .....	4
Niagara .....	King .....	140 ft. south .....	West .....	5
Niagara .....	Bathurst .....	Tecumseth .....	North .....	5
Natalie .....	Booth .....	Logan .....	North .....	4
Neepawa .....	W. limit of Lot 13	Roneesvalles .....	North .....	5
Napier .....	Munro .....	West end .....	North .....	4
Napier .....	Munro .....	West end .....	South .....	4
Ontario .....	Duke .....	Duchess .....	East .....	5
Oriole .....	Heath .....	Lonsdale .....	West .....	5
Oriole .....	St. Clair .....	Heath .....	East .....	5
Oxford .....	Augusta .....	Bellevue .....	South .....	5
Olive .....	Bathurst .....	Palmerston .....	South .....	5

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
671.0			July 2, 1908	W. R. Payne.
906.5			Nov. 2, 1908	Queen City Con. Pav. Co.
941.6			Nov. 16, 1908	T. E. McMurray.
208.7	5-in. concrete	206.7	Aug. 5, 1908	Queen City Con. Pav. Co.
523.3	"	516.3	Oct. 21, 1908	William Bushell.
522.5	"	515.5	Oct. 16, 1908	"
570.0	"	563.0	Oct. 13, 1908	Day labor.
570.8	"	563.8	Oct. 12, 1908	"
598.4	"	598.4	Oct. 12, 1908	Excelsior Con. & Pav. Co.
1,279.2	"	1,290.2	July 7, 1908	Crescent Con. Pav. Co.
1,827.0		1,833.5	June 25, 1908	" "
322.0	6-in. concrete	326.0	June 9, 1908	T. E. McMurray.
660.2			May 19, 1908	Day labor.
1,500.7	5-in. concrete	22.3	June 16, 1908	Ontario Con. Pav. Co.
452.5	"	457.0	May 21, 1908	J. J. Thomson.
2,688.0	"	2,688.0	June 9, 1908	Grant Contracting Co.
2,688.0	"	2,688.0	June 18, 1908	" "
770.7	5-in. concrete	785.3	May 1, 1908	" "
770.1	"	783.6	May 1, 1908	" "
958.7	"	965.0	April 30, 1908	Leach Concrete Co.
1,965.5	"	1,959.4	May 6, 1908	Crescent Con. Pav. Co.
757.9	"	757.9	May 1, 1908	" "
1,281.7			Sept. 18, 1908	Day labor.
1,336.6			Sept. 28, 1908	"
219.0	5-in. concrete	219.0	May 5, 1908	Grant Contracting Co.
204.6	"	208.6	May 5, 1908	"
135.0			Aug. 31, 1908	Reeve Con. Pav. Co.
432.6	5-in. concrete	12.5	April 4, 1908	Crescent Con. Pav. Co.
691.7	"	696.2	Nov. 10, 1908	Grant Contracting Co.
278.7	"	287.2	Aug. 21, 1908	Day labor.
224.0	"	224.0	Oct. 28, 1908	W. R. Payne.
241.0	"	241.0	Oct. 25, 1908	"
685.4	"	689.0	Oct. 27, 1908	Ontario Con. Pav. Co.
343.2			Oct. 21, 1908	" "
293.3	5-in. concrete	260.3	June 19, 1908	Grant Contracting Co.
138.7			June 6, 1908	" "
665.0			July 16, 1908	Reeve Con. Pav. Co.
268.5	5-in. concrete	238.7	May 20, 1908	Queen City Con. Pav. Co.
278.2	"	289.2	July 4, 1908	Grant Contracting Co.
334.5			Oct. 26, 1908	Day labor.
334.5			Oct. 30, 1908	"
455.8			Oct. 16, 1908	R. A. Rogers.
684.3	5-in. concrete	684.3	July 7, 1908	Day labor.
740.5	"	740.5	Oct. 6, 1908	Reeve Con. Pav. Co.
316.1	"	316.1	Sept. 5, 1908	Day labor.
618.8			Aug. 24, 1908	Reeve Con. Pav. Co.

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet.
Oriole .....	Heath .....	Lonsdale.....	East...	5
Olive .....	Manning.....	Palmerston .....	South ..	5
Ongiara (on Island) .....	Lake Shore .....	Iroquois .....	Centre ..	5
Ontario .....	Wellesley .....	St. James .....	East ..	5
Ontario .....	Queen .....	Sydenham .....	East ..	5
Ontario .....	Queen .....	N.s.Syd'n'h'm(prod.)	West ..	5
Oxford .....	Belle Vue .....	Lippincott .....	North ..	5
Pape .....	s.s. Bain (prod.) .....	Danforth .....	East ..	5
Power .....	King .....	218 ft. north .....	East ..	6
Pearson .....	Roncesvalles .....	Sunnyside .....	South ..	5
Pearson .....	Roncesvalles .....	Sunnyside .....	North ..	5
Pears .....	Avenue Road .....	123 ft. e. of Bedford	North ..	5
Parliament .....	40 ft. n. of Prospect	Wellesley .....	West ..	6
Parliament .....	Carlton .....	Winchester .....	West ..	6
Palmerston .....	London .....	Seaton Sq .....	East ..	5
Perth .....	Hugo .....	Addison .....	West ..	4
Palmerston .....	Queen .....	Robinson .....	East ..	5
Palmerston .....	Queen .....	Robinson .....	West ..	5
Parliament .....	85 ft. s. of Winchest'r	Carlton .....	East ..	8
Peel .....	Dufferin .....	Gladstone .....	South ..	5
Palmerston .....	Olive .....	Dupont .....	East ..	5
Palmerston .....	Arthur .....	College .....	East ..	5
Parliament .....	n. limit of No. 308	1st lane n. of Wilton	West ..	8
Queen .....	Vanauley .....	144 ft. east .....	North ..	11
Queen .....	Pape .....	Kingston Rd. ....	North ..	6
Queen .....	Wheeler .....	Lee .....	North ..	5
Queen .....	Callendar .....	Roncesvalles .....	North ..	6
Queen .....	770 ft. e. of Lee .....	East City limit .....	South ..	5
Queen .....	Woodbine .....	Wheeler .....	North ..	5
Queen .....	Lewis .....	111 ft. west .....	South ..	6
Queen .....	50 ft. e. of Dovercourt	93 ft. further east .....	South ..	10
Robinson .....	Euclid .....	Bellwoods .....	South ..	5
Ritchie .....	Dundas .....	North end .....	West ..	5
Rebecca .....	Givens .....	Dundas .....	South ..	4
Robinson .....	Euclid .....	Manning .....	North ..	5
Riverdale .....	Broadview .....	e. limit of No. 98 .....	North ..	5
Russett .....	762 ft. n. of Bloor .....	987 ft. n. of Bloor .....	West ..	4
Robinson .....	Palmerston .....	Markham .....	South ..	5
Robinson .....	Bathurst .....	Markham .....	South ..	5
Riverdale .....	Logan .....	Carlaw .....	North ..	5
Radenhurst .....	River .....	Defries .....	North ..	4
Russell .....	Spadina .....	Robert .....	North ..	4
Russell Hill Rd. ....	Poplar Plains .....	St. Clair .....	E. & N.	5
Rusholme .....	St. Anne's .....	Dundas .....	East ..	5
Rusholme .....	College. ....	St. Anne's .....	West ..	5
Rowanwood.....	429 ft. e. of Yonge .....	W.s. Cluny (prod.)	North ..	4½

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Contractor.	Completed
	Class.	Length in Feet.		
684.0	5-in. concrete....	684.0	July 31, 1908	E. H. Schoales.
625.0	.....	June 22, 1908	W. R. Payne.	
649.7	.....	June 12, 1908	Day labor.	
554.0	.....	June 16, 1908	Queen City Con. Pav. Co.	
443.3	.....	May 14, 1908	" "	
502.5	.....	May 16, 1908	" "	
502.0	5-in. concrete....	506.5	June 26, 1908	Day labor.
2,168.2	.....	Oct. 30, 1908	A. Gardner & Co.	
198.5	.....	Oct. 10, 1908	Ontario Con. Paving Co.	
527.5	5 in. concrete....	520.0	Oct. 12, 1908	William Bushell.
546.3	"	522.0	Oct. 7, 1908	"
633.6	"	630.1	Aug. 28, 1908	Grant Contracting Co.
332.8	.....	Aug. 11, 1908	Queen City Con. Pav. Co.	
522.9	.....	Sept. 24, 1908	Ontario Con. Paving Co.	
132.7	.....	June 2, 1908	Reeve Concrete Pav. Co.	
190.8	5 in. concrete....	190.8	June 3, 1908	E. H. Schoales.
573.0	"	547.2	May 27, 1908	Reeve Concrete Pav. Co.
600.2	"	578.5	May 21, 1908	" "
401.0	.....	July 13, 1908	Ontario Con. Paving Co.	
365.0	5 in. concrete....	361.0	May 29, 1908	J. J. Thomson.
1,031.4	.....	June 1, 1908	Reeve Concrete Pav. Co.	
1,490.0	.....	June 1, 1908	Ontario Con. Paving Co.	
208.5	5 in. concrete....	50.5	Nov. 4, 1908	A. Johnson.
151.8	.....	July 29, 1908	Ontario Con. Paving Co.	
6,546.0	5 in. concrete....	6.4	May 15, 1908	Schoales & McMurray.
231.0	"	34.0	Aug. 5, 1908	A. Johnson.
968.8	.....	June 30, 1908	Ontario Con. Paving Co.	
1,047.0	.....	June 17, 1908	E. H. Schoales.	
1,596.4	.....	Nov. 4, 1908	R. A. Rogers.	
127.3	.....	May 26, 1908	Queen City Con. Pav. Co.	
92.8	.....	Nov. 7, 1908	Day labor.	
790.0	5 in. concrete....	802.7	May 13, 1908	Reeve Concrete Pav. Co.
553.8	"	566.8	Oct. 17, 1908	W. R. Payne.
324.3	"	324.3	May 30, 1908	E. H. Schoales.
315.3	"	312.2	Oct. 22, 1908	Reeve Concrete Pav. Co.
1,103.7	"	1,101.0	Oct. 10, 1908	Queen City Con. Pav. Co.
224.0	.....	Oct. 3, 1908	Day labor, order of Council	
261.7	.....	Oct. 8, 1908	Day labor.	
268.5	.....	Oct. 8, 1908	"	
623.0	5 in. concrete....	615.0	Oct. 6, 1908	Queen City Con. Pav. Co.
281.3	"	284.3	Aug. 31, 1908	Day labor.
217.2	.....	July 6, 1908	Reeve Concrete Pav. Co.	
2,393.9	.....	Aug. 27, 1908	Grant Contracting Co.	
630.9	.....	Aug. 26, 1908	E. H. Schoales.	
659.7	5-in. concrete ...	30.0	Aug. 21, 1908	" "
466.8	.....	Aug. 21, 1908	Crescent Con. Pav. Co.	

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet.
Rowanwood.....	Cluny .....	Searth .....	South ..	4½
Riverdale.....	1,126 ft. e. of Broadview .....	Logan .....	South ..	5
Richmond.....	Jarvis .....	158 feet west .....	South ..	6
Reid.....	Queen .....	North City limit .....	East ..	4
River.....	King .....	Queen .....	West ..	5
Renfrew Place .....	McCaul .....	St. Patrick Square .....	South ..	4
Reid.....	180 ft. e. Sackville .....	82 feet further east .....	South ..	4
Roncesvalles.....	Hewitt .....	Boulevard .....	West ..	5
Roncesvalles.....	Queen .....	167 ft. n. of Grafton .....	East ..	5
Riverdale.....	926 ft. e. Broadview .....	200 feet further east .....	South ..	5
Sumach.....	95 ft. n. of Gerrard .....	Spruce .....	East ..	5
Sherbourne.....	Queen .....	Britain .....	West ..	6
Seaton Square .....	West side of East Branch .....	Branch .....	West ..	5
Seaton Square .....	South side of North Branch .....	Branch .....	South ..	5
Sinclair.....	Chelsea .....	Conduit .....	East ..	5
Sinclair.....	Chelsea .....	Conduit .....	West ..	5
Shanly.....	Dovercourt .....	Delaware .....	North ..	5
Searth.....	Chestnut Park .....	N. limit of lot No. 23 .....	East ..	4½
Sackville.....	Amelia .....	Wellesley .....	West ..	5
Shaw.....	Queen .....	Argyle .....	West ..	5
Shaw.....	Argyle .....	Halton .....	West ..	5
Shanly.....	Westmoreland .....	Salem .....	North ..	5
Shanly.....	Salem .....	Bartlett .....	North ..	5
Shanly.....	Bartlett .....	Gladstone .....	North ..	5
Sparkhall.....	Broadview .....	381 feet east .....	South ..	5
Shaw.....	Queen .....	Arthur .....	East ..	5
Spadina.....	Division .....	100 feet north .....	East ..	6
Salisbury.....	195 ft. 6 in. west of Sackville .....	98 feet further west .....	South ..	3½
Shiawassi (on Island)	Lake Shore .....	Iroquois .....	Centre ..	5
Sumach.....	Wilton .....	Oak .....	East ..	5
Saulter.....	Queen .....	G. T. R. .....	West ..	5
Sumach.....	Spruce .....	Geneva .....	East ..	5
Sherbourne.....	Elm .....	454 feet south .....	West ..	6
Sumach.....	Queen .....	St. David .....	West ..	5
Starr.....	Empress Crescent .....	Dunn .....	N. & E. ..	5
Saulter.....	Queen .....	G. T. R. .....	East ..	5
Strange.....	Queen .....	G. T. R. .....	West ..	4
Sumach.....	Carlton .....	Geneva .....	East ..	5
Sumach.....	Oak .....	Gerrard .....	East ..	5
Sydenham.....	Parliament .....	Sackville .....	South ..	5
Seaton.....	Queen .....	Wilton .....	East ..	5
Scollard.....	Yonge .....	171 ft. west .....	North ..	5
Shaw.....	King .....	Defoe .....	East ..	5

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
712.4			Aug. 24, 1908	Crescent Con. Pav. Co.
657.0			May 19, 1908	Ontario Con. Pav. Co.
82.7			May 16, 1908	Queen City Con. Pav. Co.
200.4	5-in. concrete.	200.4	June 2, 1908	Crescent Con. Pav. Co.
155.9	"	135.7	June 15, 1908	A. Johnson.
113.0	"	128.9	June 16, 1908	G. H. Hennis.
92.0			June 16, 1908	Queen City Con. Pav. Co.
375.8	5-in. concrete.	43.8	July 10, 1908	Grant Contracting Co.
432.0	"	28.0	Oct. 5, 1908	Day labor, order of Council
200.0			May 19, 1908	A. J. Penberthy.
336.8	5-in. concrete	317.4	Aug. 12, 1908	W. R. Payne.
143.1			Aug. 6, 1908	Day labor.
232.0	5-in. concrete	241.0	July 28, 1908	Crescent Con. Pav. Co.
202.1			July 28, 1908	" "
622.6			July 6, 1908	Day labor.
620.9			July 7, 1908	" "
286.8			July 4, 1908	T. E. McMurray.
734.7			Aug. 28, 1908	Crescent Con. Pav. Co.
318.5			Sept. 10, 1908	Ontario Con. Pav. Co.
969.6	5-in. concrete	982.6	Sept. 26, 1908	Grant Contracting Co.
486.7	"	501.2	Sept. 20, 1908	" "
323.6			Sept. 10, 1908	Crescent Con. Pav. Co.
308.6			Sept. 11, 1908	" "
310.5			Sept. 12, 1908	" "
384.8			Sept. 26, 1908	Queen City Con. Pav. Co.
1,843.8		1,755.5	Sept. 25, 1908	Grant Contracting Co.
110.2			June 26, 1908	Crescent Con. Pav. Co.
98.1	5-in. concrete	98.1	June 10, 1908	Queen City Con. Pav. Co.
656.4			June 9, 1908	Day labor.
439.1	5-in. concrete	62.5	June 9, 1908	Queen City Con. Pav. Co.
812.0			June 15, 1908	A. J. Penberthy.
214.6	(5-in. concrete)	27.8	June 11, 1908	Queen City Con. Pav. Co.
	(6-in. concrete)	31.4		
486.9			Oct. 9, 1908	Ontario Con. Pav. Co.
923.1	5-in. concrete	953.1	Oct. 29, 1908	A. J. Penberthy.
671.0	"	668.5	Nov. 3, 1908	Day labor.
835.0			May 26, 1908	Queen City Con. Pav. Co.
510.0	5-in. concrete	445.5	May 12, 1908	Excelsior Con. & Pav. Co.
222.1	6-in. concrete	27.5	May 9, 1908	Enterprise Contract'g Co.
416.8	5-in. concrete	25.5	May 11, 1908	" "
776.3	"	818.5	May 14, 1908	Leach Concrete Co.
1,394.0			May 30, 1908	A. J. Penberthy.
170.5			April 16, 1908	Day labor.
444.0	5-in. concrete	9.5	July 7, 1908	W. R. Payne.

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width. Feet.
Spruce . . . . .	Sumach . . . . .	537 ft. east . . . . .	North . . . . .	5
Sultan . . . . .	St. Thomas . . . . .	West end . . . . .	North . . . . .	5
Sultan . . . . .	St. Thomas . . . . .	West end . . . . .	South . . . . .	5
Shaw . . . . .	Queen . . . . .	Defoe . . . . .	East . . . . .	5
Strange . . . . .	Eastern . . . . .	G.T.R . . . . .	East . . . . .	4
Shaw . . . . .	Arthur . . . . .	College . . . . .	West . . . . .	5
Shaw . . . . .	Arthur . . . . .	College . . . . .	East . . . . .	5
Shaw . . . . .	S.S. Hallam (prod.).	Mellville . . . . .	East . . . . .	5
Spruce . . . . .	Sumach . . . . .	River . . . . .	South . . . . .	5
Sackville . . . . .	Spruce . . . . .	Carlton . . . . .	West . . . . .	5
Symington . . . . .	Bloor . . . . .	South end . . . . .	West . . . . .	4
Shuter . . . . .	Victoria . . . . .	E.s. 1st lane east . . . . .	South . . . . .	6
Symington . . . . .	Paton Rd . . . . .	Wallace . . . . .	East . . . . .	5
St. Joseph . . . . .	Chapel . . . . .	Park . . . . .	North . . . . .	6
St. Patrick Sq. . . . .	Queen . . . . .	Stephanie . . . . .	East . . . . .	5
St. Helens . . . . .	Dublin . . . . .	Bloor . . . . .	West . . . . .	4½
St. Patrick . . . . .	Ryerson . . . . .	Bathurst . . . . .	South . . . . .	6
St. Patrick . . . . .	Spadina . . . . .	Denison . . . . .	North . . . . .	5
St. Clarens . . . . .	N. limit Lot 18 . . . . .	Lappin . . . . .	West . . . . .	4
St. Clarens . . . . .	Paton Rd . . . . .	Wallace . . . . .	West . . . . .	5
St. Andrews(on Isl'nd)	Lake Shore . . . . .	Iroquois . . . . .	Centre . . . . .	6
Turner . . . . .	Tecumseth . . . . .	West end . . . . .	South . . . . .	4
Turner . . . . .	Tecumseth . . . . .	West end . . . . .	North . . . . .	4
Trinity . . . . .	Front . . . . .	King . . . . .	East . . . . .	5
Thomson . . . . .	Munro . . . . .	Davies . . . . .	North . . . . .	4½
Thomson . . . . .	Munro . . . . .	Davies . . . . .	South . . . . .	4½
Trinity . . . . .	Front . . . . .	King . . . . .	West . . . . .	5
Winchester . . . . .	Sumach . . . . .	423 ft. east . . . . .	North . . . . .	5
Wilton . . . . .	Church . . . . .	Mutual . . . . .	North . . . . .	5½
Wilton . . . . .	Berkeley . . . . .	Parliament . . . . .	North . . . . .	6
Wilton . . . . .	Milan . . . . .	Poulette . . . . .	South . . . . .	6
Wright . . . . .	Roncesvalles . . . . .	Sunnyside . . . . .	North . . . . .	5
Wright . . . . .	Roncesvalles . . . . .	Sunnyside . . . . .	South . . . . .	5
Walter . . . . .	Roncesvalles . . . . .	Sunnyside . . . . .	North . . . . .	5
Walter . . . . .	Roncesvalles . . . . .	Sunnyside . . . . .	South . . . . .	5
Wheeler . . . . .	Queen . . . . .	North City limits . . . . .	East . . . . .	5
Wells . . . . .	Bathurst . . . . .	Kendall . . . . .	North . . . . .	5
Wells . . . . .	Brunswick . . . . .	Howland . . . . .	South . . . . .	5
Wickson . . . . .	Yonge . . . . .	Oaklands . . . . .	South . . . . .	4½
Wellington . . . . .	Bathurst . . . . .	Tecumseth . . . . .	North . . . . .	5
Wickson . . . . .	Yonge . . . . .	West end . . . . .	North . . . . .	4½
Warren Road . . . . .	Schiller . . . . .	St. Clair . . . . .	East . . . . .	5
Warren Road . . . . .	Schiller . . . . .	St. Clair . . . . .	West . . . . .	5
Winnifred . . . . .	Queen . . . . .	Eastern . . . . .	West . . . . .	4
Wallace . . . . .	Perth . . . . .	Foot Bridge . . . . .	North . . . . .	5
Wolfrey . . . . .	Bowden . . . . .	Logan . . . . .	South . . . . .	5

CONCRETE SIDEWALKS—*Continued.*

Length, in Feet.	Curb.		Completed.	Contractor.
	Class	Length in Feet.		
647.5	5-in. concrete....	629.5	July 15, 1908	E. H. Schoales.
172.6	" .....	20.0	June 26, 1908	Crescent Con. Pav. Co.
173.0	" .....	27.0	June 25, 1908	" "
711.0	6-in. concrete....	35.0	June 24, 1908	Grant Contracting Co.
347.8	5-in. concrete....	347.8	June 1, 1908	Queen City Con. Pav. Co.
1,462.5	" .....	1,482.2	June 3, 1908	Crescent Con. Pav. Co.
1,469.1	" .....	1,494.7	May 27, 1908	" "
535.3	" .....	596.6	Oct. 20, 1908	Grant Contracting Co.
612.1	" .....	609.7	Nov. 4, 1908	Reeve Con. Pav. Co.
444.2	" .....	414.1	Nov. 14, 1908	A. J. Penberthy.
889.6	" .....	886.1	Nov. 10, 1908	Ontario Con. Pav. Co.
131.0	.....	.....	Nov. 14, 1908	Day labor.
618.0	.....	.....	Nov. 2, 1908	T. E. McMurray.
962.1	.....	.....	Oct. 30, 1908	A. Gardner & Co.
435.0	5-in. concrete....	443.0	July 10, 1908	Grant Contracting Co.
1,159.0	" .....	1,155.0	Oct. 13, 1908	Constructing & Pav. Co.
499.0	.....	.....	June 24, 1908	Day labor, Order of Coun.
1,070.3	.....	.....	June 16, 1908	J. J. Thomson.
454.1	5-in. concrete....	454.1	May 13, 1908	Excelsior Con. & Pav. Co.
624.5	" .....	629.0	May 6, 1908	" "
665.4	.....	.....	Sept. 30, 1908	Day labor.
416.2	.....	.....	Oct. 24, 1908	Grant Contracting Co.
416.3	.....	.....	Oct. 24, 1908	" "
604.1	5-in. concrete....	625.6	June 12, 1908	Excelsior Con. & Pav. Co.
470.2	" .....	451.2	May 11, 1908	Day labor.
430.4	" .....	419.1	May 14, 1908	" "
585.7	" .....	612.1	June 20, 1908	Queen City Con. Pav. Co.
436.0	" .....	15.8	Aug. 6, 1908	Day labor, order of Council
327.1	.....	.....	June 8, 1908	W. R. Payne.
326.9	.....	.....	June 29, 1908	E. H. Schodles.
309.0	.....	.....	June 5, 1908	A. J. Penberthy.
556.6	5-in. concrete....	550.1	Sept. 23, 1908	William Bushell.
556.5	" .....	550.0	Sept. 30, 1908	" "
569.1	" .....	562.2	Sept. 29, 1908	Reeve Con. Pav. Co.
569.2	" .....	562.4	Sept. 26, 1908	" "
199.5	" .....	199.5	June 22, 1908	A. Johnson.
1,264.4	" .....	1,223.0	June 3, 1908	Day labor.
315.0	" .....	301.5	June 20, 1908	" "
1,555.6	" .....	1,560.1	June 29, 1908	" "
655.3	" .....	655.3	Oct. 19, 1908	Excelsior Con. & Pav. Co.
1,332.0	" .....	1,331.0	June 17, 1908	Day labor
957.0	.....	.....	June 17, 1908	Leach Con. Co.
1,006.7	.....	.....	June 17, 1908	" "
958.4	5-in. concrete....	958.4	June 6, 1908	Queen City Con. Pav. Co.
618.8	" .....	607.0	May 29, 1908	G. H. Hemis.
1,073.5	" .....	1,073.5	May 13, 1908	Constructing & Pav. Co.

CONCRETE SIDEWALKS--*Continued.*

Street.	From.	To.	Side.	Width Feet.
Withrow .....	1,046 ft. e. Broadview.	Logan .....	South ..	6
Wolfrey .....	Broadview .....	Logan .....	North ..	5
*Withrow .....	Broadview .....	Logan .....	North ..	5
Widmer .....	King .....	Adelaide .....	East ..	5
Waverley .....	Queen .....	120 ft. north .....	West ..	5
Wardell .....	S. side Cummings (prod.)	Whitby .....	East ..	4
Walnut .....	King .....	Wellington .....	East ..	4
Wellington .....	E.s. Stafford (prod.)	Niagara .....	South ..	6
Westmoreland .....	Bloor .....	Shanly .....	East ..	5
Yonge .....	Qneen .....	Carlton .....	East ..	11½-12
Yarmouth .....	Manning .....	Clinton .....	North ..	5
Yonge .....	Price .....	Shaftesbury .....	East ..	6
Yonge .....	Shaftesbury .....	Summerhill .....	East ..	6
Yonge .....	Collier .....	Severn .....	East ..	11-12
Yonge .....	36 ft. n. Bismarek.	36 ft. further north .....	East ..	11
Yonge .....	Roxborough .....	Rowanwood .....	East ..	4½
Yonge .....	Severn .....	Roxborough .....	East ..	6
Yarmouth .....	Christie .....	Miles Pl .....	North ..	4½
Yonge .....	Walker .....	North City limits .....	West ..	6
Yorkville .....	640 ft. w. Yonge	Avenue Road .....	South ..	6
Yarmouth .....	Miles Pl .....	Shaw .....	North ..	4½
Total length in feet .....				
" miles.....				

\*Carried over from 1907.

\*\*Carried over from 1906.

## BRICK SIDEWALKS.

Street.	From.	To.	Side.	Width in Feet.
Chestnut Park Road	on first Island east of Yonge St. made by Chestnut Pk. Rd.	with Roxborough St.	W., N., E.	4
Roxborough east .....	Yonge .....	100 ft. w. of w.s. Cluny (Prod.) .....	North ..	4

CONCRETE SIDEWALKS—*Continued.*

Length Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
656.0			April 28, 1908	Queen City Con. Pav. Co.
2,090.5	5-in. concrete	2,086.0	May 13, 1908	Constructing & Pav. Co.
404.9			April 24, 1908	Queen City Con. Pav. Co.
394.8			April 25, 1908	A. Johnson.
119.5	5-in. concrete	119.5	July 10, 1908	A. Gardner & Co.
335.6	"	310.4	Nov. 12, 1908	Queen City Con. Pav. Co.
471.4			Nov. 10, 1908	Day labor.
1,003.0			Nov. 27, 1908	Reeve Con. Pav. Co.
1,111.0			Nov. 13, 1908	A. Gardner & Co.
2,680.0			Oct. 20, 1908	"
314.0			July 14, 1908	W. R. Payne.
510.5			Sept. 3, 1908	Crescent Con. Pav. Co.
397.1			Sept. 3, 1908	" "
347.3			May 22, 1908	E. H. Schoales.
36.0			April 16, 1908	Day labor.
468.7			April 23, 1908	"
1,608.5	5-in. concrete	18.0	Aug. 10, 1908	Crescent Con. Pav. Co.
679.0	"	1.0	May 4, 1908	Reeve Con. Pav. Co.
590.9	"	20.8	May 31, 1908	Day labor.
280.3			June 30, 1908	Day labor, Order of Coun.
667.2			Nov. 11, 1908	W. R. Payne.
282,440.5	ft.	116,712.5		
53,492	miles.	22,104		

## BRICK SIDEWALKS.

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
941.5			Nov. 2, 1908	Day labor.
722.7			Oct. 26, 1908	"
1,664.2				

TABLE No. 8.

Class of Work.	Total miles in City, yds.	Year first laid. sq. yards.	Maximum of permitted years.	Maximum cost per sq. yd. 1908.	Minimum cost per sq. yd. 1908.	Average cost per sq. yd. 1908.	Remarks.
				sq. yards laid in 1908.	sq. yards laid in 1908.	sq. yards laid in 1908.	
Asphalt . . . . .	1,692,426	101,07	313,532	1888	4.73	10	2.92 Heavy (prices for).
Asphalt block . . . . .	16,677	0.97	9,469	1904	3.82	10	1.96 Light (prices for).
Brick on concrete . . . . .	337,629	22,01	16,612	1893	5.50	5	1.33 4" blocks, 16" con. (prices)
Brick (blk) . . . . .	15,031	.....	14,206	.....	.....	10	3.20 3" blocks, 4" con. (prices)
Brick on broken stone . . . . .	32,009	2,218	.842	1899	.....	5	2.40 On 4 in. concrete.
Brick on gravel . . . . .	.....	.....	2,218	1896	.....	5	2.40 On 6 in. concrete.
Cedar block . . . . .	.....	.....	1,636	1881	3.78	5	..... None laid in 1908.
Gravel . . . . .	.....	.....	24,77	.....	.....	5	..... Including East Toronto.
*Scoria and granite . . . . .	83,880	4,847	13,65	1880	.....	1	..... None laid in 1908.
Macadam . . . . .	44,16	44,16	12,317	1884	.....	5	..... 13 in. in depth.
Tar Macadam . . . . .	86,619	5,71	15,656	1906	3.70	1	..... None laid in 1908.
Bitulithic . . . . .	230,691	15,656	80,539	1904	10.94	10	2.25 2.25

<sup>†</sup>On concrete.<sup>\*</sup>Street Railway track allowance not included in total mileage.

TABLE No. 9.

GIVING MILEAGE OF CEMENT, CONCRETE AND BRICK SIDEWALKS CONSTRUCTED  
IN THE CITY OF TORONTO.

Year.	Cement Concrete	Brick.	Total.
Up to 1889.....	1.190	.....	1.190
1890.....	1.426	.....	1.426
1891.....	1.950	.....	1.950
1892.....	1.508	.....	1.508
1893.....	2.259	.....	2.259
1894.....	1.137	.....	1.137
1895.....	1.918	.....	1.918
1896.....	0.612	0.204	0.816
1897.....	1.050	0.820	1.870
1898.....	2.107	1.190	3.297
1899.....	5.470	0.290	5.760
1900.....	15.227	0.038	15.265
1901.....	17.305	0.511	17.816
1902.....	27.360	0.049	27.409
1903.....	34.896	0.093	34.989
1904.....	31.058	0.001	31.059
1905.....	37.500	0.037	37.537
1906.....	43.536	0.131	43.666
1907.....	58.309	.....	58.309
1908.....	55.101	0.303	55.404
Totals .....	340,919	3,666	344,585

TABLE No. 10.  
CONCRETE WALKS CONSTRUCTED BY DAY LABOR, 1908.

Street.	Side.	From.	To.	Width in Feet.	Description.	Length in Feet.
Albert .....	S	Elizabeth ....	Chestnut.....	6	Pres. position	182.2
Albert .....	N	James .....	Chestnut .....	6	Pres. position	827.6
Augusta .....	W	Denison .....	Bellevue .....	5	Next curb.....	168.
Alma .....	S	Gladstone .....	Dufferin .....	4 $\frac{1}{2}$	With curb.....	371.1
Broadview.....	W	29 ft. n. Gerrard	971 ft. further n.	6	Pres. position	1,010.
Bloor.....	S	St. Clarens ...	Brock .....	5	Pres. position	556.
Balmoral .....	N	Avenue Rd....	Popl'r PlainsRd	5	Next curb.....	608.
Bathurst .....	E	Farley.....	Adelaide .....	6	Next curb.....	447.
Beatrice .....	W	922 ft. n. of n.e. cor. College.	57 ft. further n.	4 $\frac{1}{2}$	With curb.....	56.9
Crocker.....	N	Bellwoods ....	East end .....	4	With curb.....	433.9
Constance.....	N	Roncesvalles ..	Sunnyside .....	5	With curb.....	572.
Constance.....	S	Roncesvalles ..	Sunnyside .....	5	With curb.....	572.3
Chestnut .....	W	Elm .....	136 ft. south ..	5	Next curb.....	139.4
College .....	S	Huron .....	368 ft. west....	6	Pres. position	290.4
Clinton .....	W	Bloor .....	320 ft. north ..	5	Next curb.....	408.
Crescent Rd....	S	Park Rd .....	Searth Rd .....	4	Next curb.....	217.3
Dupont.....	N	Howland .....	Kendal .....	5	Next curb.....	634.9
Dufferin .....	W	Bloor .....	S. limit of Sch'l Property.	5	With curb .....	416.
Dagmar.....	S	275 ft. e. Pipe.	Brooklyn ...	5	Next curb.....	175.8
Davenport .....	N	Bedford .....	635 ft. w. of Avenue Rd.	5	Next curb .....	189.5
Davies .....	E	Queen .....	Matilda .....	4	Next curb.....	613.
Elizabeth .....	E	1st lane n. Col- lege.	Grenville .....	5	Pres. position	116.
Front .....	S	Trinity .....	Cherry .....	5	Next curb.....	599.6
Front .....	N	Princess .....	Sherbourne .....	5	Next curb.....	274.8
First .....	S	Bolton.....	DeGrassi.....	5	Next curb.....	218.
Foxbar .....	N & W	Avenue Rd....	St. Clair .....	5	With curb.....	1,258.8
Gerrard.....	N	Parliament ...	Sackville .....	6	Pres. position	783.3
Hallam .....	S	Dovercourt .....	Delaware.....	5	Next curb.....	286.
Iroquois .....	S	Manitou .....	St. Andrews .....	6	Cen. of street	1,730.8
James .....	W	Queen .....	Albert .....	6	With curb.....	839.6
King .....	S	Dufferin .....	Mowat .....	6	Next curb.....	320.
King .....	S	Spadina .....	Bathurst .....	6	Pres. position	1,732.1
Leslie .....	W	Gerrard .....	Harriett .....	5	With curb.....	736.3
Lynd .....	W	College .....	Neepawa .....	5	With curb.....	411.
Lindsay .....	N	Havelock .....	Gladstone .....	5	Next curb.....	384.2
Lindsay .....	S	Havelock .....	Gladstone .....	5	Next curb.....	406.
Montrose .....	W	Sully Cres .....	Cinder.....	5	With curb .....	262.3

TABLE No. 10.

## CONCRETE WALKS CONSTRUCTED BY DAY LABOR, 1908.

City's Tender.	Length in miles on a basis of 5 ft. wide.						Actual cost of Work included in Tender.	Cost of Work not included in Tender.	Total cost of Work, exclusive of interest on money.	The difference between contract cost and cost based on Contractor's lowest Tender.	
	\$	c.	\$	c.	\$	c.				\$	c.
70 .0414	78	.94	4 35	171 69	176 04	....	29 58				
81 .188	87	.695	53 39	575 31	628 70	144 70	....				
O. of C. .0318	....	.789	2 50	132 59	135 09	....	....				
1 10 .063	....	.884	22 67	328 15	350 82	80 06	....				
O. of C. .2295	....	.811	57 08	763 51	820 59	....	....				
O. of C. .1053	....	.599	13 04	333 38	346 42	....	....				
75 .1151	77	.820	34 04	498 74	464 70	....	29 68				
85 .1082	90	.765	45 85	342 38	388 13	60 02	....				
O. of C. .0108	....	1,030	79	58 64	59 43	....	....				
52 .0657	.555	.609	21 49	264 26	285 75	....	23 45				
1 10 .1081	1 16	.898	23 70	513 72	537 42	149 82	....				
1 10 .1083	1 16	.859	23 61	492 06	515 7	169 81	....				
.665 .0264	.785	.770	2 33	107 43	109 76	4 09	....				
78 .066	....	.724	19 31	210 42	229 73	16 09	....				
1 20 .0772	1 24	.728	13 26	297 59	310 85	208 33	....				
48 .0329	55	.565	21 65	122 88	144 53	....	3 37				
73 .1202	75	.813	28 68	515 80	544 48	....	39 62				
O. of C. .0787	....	.985	11 09	409 80	420 89	....	....				
65 .0332	.675	.68	4 70	119 68	124 88	....	1 01				
65 .036	65	.865	11 35	163 90	175 25	....	40 72				
65 .0928	70	.692	19 57	424 46	444 03	4 64	....				
62 .0219	65	.742	7 57	86 04	93 61	....	10 64				
65 .1135	.659	.543	17 82	325 72	343 54	69 42	....				
65 .0662	.659	.626	13 22	172 09	185 31	9 00	....				
65 .0412	68	.708	2 93	154 42	157 35	....	26 18				
O. of C. .2383	....	1,181	101 42	1,486 83	1,588 25	....	....				
86 .1784	96	.697	36 74	547 71	584 45	206 18	....				
1 17 .0541	1 15	.916	4 29	262 09	266 38	66 81	....				
90 .3278	1 00	.646	56 77	1,117 77	1,061 90	613 05	....				
O. of C. .077	....	1.51	34 26	513 15	547 41	....	....				
O. of C. .0727	....	.803	5 00	256 10	261 10	....	....				
88 .3936	92	.723	88 11	1,253 40	1,341 51	340 11	....				
1 07 .1394	.908	.959	56 96	706 57	763 53	161 99	....				
O. of C. .1005	....	.74	76 98	303 87	380 85	....	....				
75 .0727	79	.716	15 44	274 70	290 14	28 82	....				
75 .0768	79	.74	11 06	290 63	301 69	20 30	....				
1 19 .0527	1 25	1.05	41 79	276 35	318 14	51 52	....				

TABLE No. 10—*Continued.*  
CONCRETE WALKS CONSTRUCTED BY DAY LABOR, 1908.

Street.	Side.	From.	To.	Width in Feet.	Description.	Length in Feet.
Marmaduke ....	N	Roncesvalles ..	Sunnyside .....	5	With curb....	570.8
Marmaduke ....	S	Roncesvalles ..	Sunnyside .....	5	With curb....	570.0
Manning ....	E	Robinson .....	Arthur.....	5	With curb....	1,274.7
Manning ....	W	Robinson .....	Arthur .....	5	With curb....	1,327.6
Mercer ....	N	John .....	Peter .....	5	Next curb....	660.2
Napier ....	N	Munro .....	West end .....	4	Next curb....	334.5
Napier ....	S	Munro .....	West end .....	4	Next curb....	334.5
Oxford ....	N	Bellevue .....	Lippincott .....	5	With curb....	502.
Oxford ....	S	Bellevue .....	Augusta .....	5	With curb....	316.1
Oriole ....	W	Heath .....	Lonsdale .....	5	With curb....	684.3
Ongiara.....	C	Lake Shore ...	Iroquois .....	5	Cen. of street	649.7
Queen .....	S	50 ft. e. Dover- court.	93 ft. fur. east.	10	Next curb....	92.8
Radenhurst ....	N	River .....	Defries .....	4	With curb ....	281.3
Robinson ....	S	Bathurst .....	Markham .....	5	Next curb....	268.5
Robinson ....	S	Palmerston....	Markham .....	5	Next curb....	261.9
Russett.....	W	762 ft. n. Bloor	987 ft. n. Bloor	4	Next curb....	224.
Roncesvalles ..	E	Queen .....	430 ft. north ..	5	2 ft. from S. L.	430.
Sherbourne .....	W	Britain .....	Queen .....	6	Pres. position	143.1
Scollard.....	N	Yonge .....	171 ft. west....	5	Pres. position	170.5
Shiawassi ....	C	Lake front .....	Iroquois .....	5	Cen. of street	636.4
Starr .....	N & E	Dunn .....	Empress Cres..	5	With curb....	671.
St. Andrews....	C	Lake Shore....	Iroquois .....	6	Cen. of street	665.4
Shuter .....	S	Victoria .....	1st lane east ..	6	Next curb....	131.
Sinclair .....	E	Conduit .....	Chelsea .....	5	Next curb....	622.6
Sinclair .....	W	Conduit .....	Chelsea .....	5	Next curb....	620.9
St. Patrick .....	S	Bathurst .....	Ryerson .....	6	Next curb ...	499.
Thomson .....	N	Munro .....	Davies .....	4½	With curb....	451.2
Thomson .....	S	Munro .....	Davies .....	4½	With curb....	411.3
Walnut .....	E	King .....	Wellington .....	4	Pres. position	471.1
Wickson .....	N	Yonge .....	West end .....	4½	With curb....	1,331.
Wickson .....	S	Yonge .....	Oaklands... ..	4½	With curb....	1,555.6
Winchester .....	N	Sumach .....	423 ft. east ..	5	Pres. position	436.
Wells .....	S	Brunswick .....	Howland .....	5	With curb....	815.
Wells .....	N	Bathurst .....	Kendal .....	5	With curb....	1,257.7
Yonge .....	E	36 ft. n. of Bis- mack .....	36 ft. fur. north	11	Next curb....	36.
Yonge .....	E	Roxboro .....	Rowanwood ..	4½	Pres. position	468.7
Yonge .....	W	Walker .....	N. City limits..	6	Pres. position	590.9
Yorkville .....	S	640 ft. w. Yonge	Avenue Road..	6	Pres. position	280.3
						7½ miles

TABLE No. 10—*Continued*  
CONCRETE WALKS CONSTRUCTED BY DAY LABOR, 1908.

City's Tender.	Length in miles on a basis of 5 ft. wide.			Next lowest Ten- der, per lineal feet.			Actual cost of Work included in Ten- der.			Cost of Work not included in Ten- der.			Total cost of Work, exclusive of in- terest on money.			The difference between con- tract cost and cost based on Contractor's lowest Tender.		
	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	Gain.	Loss.
1 10 .1081	1 14 .834	90 .87	476 .32	567 .19	174 .39	....												
1 10 .1079	1 14 .805	113 .22	458 .80	572 .02	191 .00	....												
70 .2414	74 .636	54 .88	849 .32	904 .20	93 .96	....												
70 .2514	74 .567	61 .56	752 .54	814 .10	229 .88	....												
73 .1250	77 .660	101 .64	435 .84	537 .48	72 .51	....												
60 .0506	52 .529	22 .75	177 .24	199 .99	....	3 .30												
60 .0506	52 .482	26 .42	161 .20	187 .62	12 .74	....												
1 15 .0950	1 17 .983	9 .74	492 .76	503 .50	93 .58	....												
1 00 .0598	1 05 1.063	9 .75	336 .14	345 .89	....	4 .24												
1 14 .1296	1 15 1.093	12 .72	748 .01	760 .73	38 .93	....												
75 .1230	84 .574	52 .15	373 .48	425 .63	172 .27	....												
19 .0351	19 .17	2 .45	158 .60	161 .05	18 .56	....												
90 .0426	92 .922	16 .47	259 .57	276 .04	....	79												
60 .0508	62 .661	17 .68	177 .48	195 .16	....	11 .01												
60 .0500	62 .567	17 .68	148 .53	166 .21	13 .85	....												
O. of C. .0339	....	.596	2 .78	133 .63	136 .41	....												
O. of C. ....	....	.775	....	335 .14	335 .14	....												
90 .0324	99 .648	9 .27	92 .75	102 .02	48 .92	....												
75 .0322	85 .737	2 .00	125 .73	127 .73	19 .20	....												
75 .1243	84 .784	14 .16	516 .23	502 .07	35 .15	....												
1 10 .1270	1 12 .992	21 .68	665 .50	687 .18	86 .02	....												
66 .1489	54 .597	57 .20	397 .16	454 .36	42 .00	....												
72 .0297	....	1.02	12 .05	133 .53	145 .58	....	39 .30											
70 .1179	1 00 .583	21 .52	362 .92	384 .44	72 .90	....												
70 .1175	1 00 .49	25 .41	304 .43	329 .84	130 .20	....												
O. of C. .1134	....	.86	6 .84	422 .10	428 .94	....												
1 12 .0814	1 16 .812	38 .29	366 .64	404 .93	156 .75	....												
1 12 .0733	1 16 .798	35 .91	328 .53	364 .44	148 .58	....												
60 .0713	....	.534	3 .97	251 .74	255 .71	....												
1 10 .2268	1 15 1.013	75 .62	1,348 .20	1,423 .82	182 .45	....												
96 .2651	.975	.927	49 .72	1,443 .02	1,492 .74	73 .69	....											
O. of C. .0825	....	.70	5 .00	304 .00	309 .00	....												
1 19 .0596	1 20 .932	22 .48	293 .75	316 .23	84 .25	....												
1 18 .2382	1 20 1.093	124 .12	1,375 .22	1,499 .34	134 .02	....												
19 .0150	20 .248	96	98 .48	99 .44	....	19 .28												
65 .0798	72 .660	9 .25	309 .44	318 .69	28 .02	....												
90 .1342	99 .854	25 .21	504 .97	530 .18	80 .02	....												
O. of C. .0530	....	.864	9 .90	242 .28	252 .18	....												
																4,848 .60	303 .35	

TABLE No. 10--*Continued.*  
BRICK WALKS CONSTRUCTED BY DAY LABOR, 1908.

Street.	Side.	From.	To.	Width in Feet.	Description.	Length in Feet.
Chestnut Pk. Rd.	N W & E	sides of 1st island e. of Yonge.		4	2 ft. from S.L.	914.
Roxborough. . .	N	Yonge .....	100 ft. w. Cluny	4	2 ft. from S.L.	705.7

TABLE No. 10—*Continued.*

BRICK WALKS CONSTRUCTED BY DAY LABOR, 1908.

\$ c.	Length in miles on a basis of 5 ft. wide.	Next lowest Ten- der, per lineal feet.	Actual cost of Work not included in Ten- der.		Cost of Work not included in Ten- der.	\$ c.	Total cost of Work, exclusive of in- terest on money.	The difference between con- tract cost and cost based on Contractor's lowest Tender.	
			\$ c.	cts.				\$ c.	\$ c.
70	.....	.708	44	46	647	58	692	04	7 78
70	.....	.72	38	85	597	39	546	24	13 40
			2,061	50	32,390	92	34,452	42	4,848 60 324 53

TABLE No. 11.

## PAVEMENTS.

No.	Street.	From.	To.	Class of Pavement.	Width in Feet.	Length in Feet.
1	Bloor, T. A.	Lansdowne	Dufferin . . .	Granite, T. A..	16.5	1,956
2	Barton . . . . .	Bathurst	Markham . . .	Asphalt. . . . .	24	266.3
3	Barton . . . . .	Palmerston	Manning . . . . .	" . . . . .	24	530
4	Balsam . . . . .	Spadina . . .	Charlotte . . .	Vitrified block	18.9	292
5	Brunswick, e.s.	College . . . .	120 ft. north.	Asphalt. . . . .	16.8	110
6	Colborne . . . . .	Church . . . . .	West Market	Asphalt block..	25.7	420.2
7	Cluny. . . . .	Roxborough	Crescent Rd.	Macadam. . . . .	21	282.3
8	West Don Esplanade . . . . .	Queen . . . . .	Mark. . . . .	Vitrified block	28	1,157
9	Euclid . . . . .	Arthur . . . . .	College. . . . .	Asphalt. . . . .	24	1,500
10	Eastern. . . . .	Carlaw . . . . .	Morse . . . . .	" . . . . .	24	278
11	Esplanade. . . . .	Yonge . . . . .	Scott, w.s. . . .	Cedar block. . . .	40-50.2	330
12	Frederick. . . . .	Front. . . . .	King. . . . .	Vitrified block	14	267
13	Franklin . . . . .	Ruskin. . . . .	North end. . . .	Asphalt. . . . .	24	1,609
14	Gladstone. . . . .	College. . . . .	Lindsay. . . . .	Light Asphalt..	24	332
15	Gore. . . . .	Clinton. . . . .	West end. . . . .	" " ..	21	296.7
16	Grace. . . . .	Bloor. . . . .	530 ft. south.	Grading. . . . .	24	530
17	Harbor. . . . .	Yonge . . . . .	Bay . . . . .	Vitrified block	42	503
18	Huntley. . . . .	Bridge . . . . .	Elm. . . . .	Macadam. . . . .	24	350.3
19	James . . . . .	Queen . . . . .	Albert . . . . .	Asphalt. . . . .	10.3	380
20	Keele . . . . .	Howard Park	Bloor . . . . .	Grading. . . . .	40	2,186
21	Lane 1st n. of Front . . . . .	Church. . . . .	West Market	Vitrified block	14	421
22	Lane 1st s. of King. . . . .	Church. . . . .	West Market	" "	15.2-20	441
23	Lane 1st s. of Queen . . . . .	Peter. . . . .	West end. . . .	Concrete . . . . .	14	270
24	Lane 1st s. of Queen . . . . .	Esther. . . . .	McDougall's. . .	" . . . . .	10	373
25	Lane 1st s. of Queen . . . . .	Church. . . . .	East end. . . .	Vitrified block	12	440
26	Lane bet. Elm and Edward. . . . .	Centre . . . .	Chestnut. . . . .	Brick. . . . .	12.8	240
27	Lane 1st n. of Front . . . . .	Spadina . . . .	East end. . . .	Vitrified block	14	383
28	Ontario. . . . .	Queen . . . . .	Duke. . . . .	Asphalt. . . . .	24	765
29	Perth. . . . .	Bloor. . . . .	South end. . . .	" . . . . .	24	871
30	Parliament . . . . .	Wellesley, s.s. .	45 ft. n. of s.s. of Howard. . . . .	" . . . . .	24	1,287
31	Parliament . . . . .	Winchester. . . .	Wellesley. . . . .	" . . . . .	26	810
32	Pinehill. . . . .	Rosedale Rd. . .	West end. . . .	Macadam. . . . .	18	298

TABLE No. 11.

## PAVEMENTS.

City's Tender.	Next Lowest.	Cost of work not included in Ten- der.	Actual cost of work included in Ten- der.	Total cost of work exclusive of in- terest on money.	Total cost of work based on Con- tractor's next lowest Tender.	Difference between actual cost and cost based on Con- tractor's next lowest Tender.	
						\$	c.
Order of C ouncil.			13,085 00	13,085 00			
1,141 00	1,150 00	13 35	969 75	983 10	1,163 35	180 25	....
2,540 00	2,630 00	34 10	1,963 72	1,997 82	2,664 10	666 28	....
1,350 00	1,465 00	28 63	1,400 00	1,428 63	1,493 63	65 00	....
349 00	350 00	5 74	307 62	313 36	355 74	42 38	....
4,341 00	4,579 00	245 22	3,574 14	3,819 36	4,824 22	804 86	....
Order of C ouncil.		55 23	998 47	1,053 70			
9,567 00	10,285 00	681 46	8,412 00	9,093 46	11,066 46	1,873 00	....
6,490 00	6,525 00	189 16	5,723 34	5,912 50	6,714 16	801 66	....
1,330 00	1,379 00	79 48	1,229 00	1,308 48	1,458 48	150 09	....
Order of C ouncil.		64 64	3,740 89	3,805 53			
2,344 00	2,442 00	64 02	2,077 30	2,141 32	2,506 02	364 70	....
6,979 00	7,280 00	145 16	5,530 05	5,675 21	7,425 16	1,749 95	....
1,437 00	1,497 00	62 08	1,073 83	1,135 91	1,559 08	423 17	....
1,263 00	1,359 00	79 85	1,019 29	1,099 14	1,438 85	339 71	....
Order of C ouncil.		22 48	1,544 76	1,567 24			
6,207 00	6,238 00	195 42	6,008 16	5,812 74	6,042 58	229 84	....
1,578 00	1,721 00	17 83	1,337 11	1,354 94	1,738 83	383 89	....
1,082 00	1,246 00	204 94	1,172 76	1,327 70	1,450 94	123 24	....
4,000 00	4,350 00	1,397 91	2,871 14	4,269 05	5,747 91	1,478 86	....
1,880 00	1,902 00	213 35	1,547 93	1,761 28	2,115 35	354 07	....
1,838 00		249 09	1,715 11	1,964 20		122 89	....
671 00	728 00	25 66	776 18	801 84	753 66	48 18	....
861 00	898 00	36 98	867 00	903 98	934 98	31 00	....
1,862 00	1,889 00	63 16	1,383 03	1,446 19	1,952 16	505 97	....
960 00		136 93	1,095 86	1,232 79		35 86	
1,400 00	3,064 00	298 59	1,335 13	1,633 72	3,362 59	1,728 87	....
3,016 00	3,268 00	144 72	2,281 69	2,426 41	3,412 72	986 31	....
3,964 00	4,058 00	56 90	3,375 35	3,432 25	4,104 90	682 65	....
5,944 00	5,995 00	190 37	4,395 00	4,585 37	6,185 37	1,600 00	....
5,767 00	5,689 00	248 28	4,340 29	4,588 57	5,937 28	1,426 71	....
Order of C ouncil.		883 00	892 00	11 89	783 08	794 97	903 89
						108 92	....

TABLE No. 11.  
PAVEMENTS—*Continued.*

No.	Street.	From.	To.	Class of Pavement.	Width in Feet.	Length in Feet.
33	Parkview.....	175 ft. n. of Wellesley	63 ft. fur. n.	Macadam . . . .	24	63
34	Parliament . . . .	King.....	Mill, s.s.....	Vitrified block	32	960
35	River.....	King.....	Queen . . . .	" "	24	129
36	Sinclair.....	Conduit . . . .	Chelsea . . . .	Asphalt. . . . .	24	598.5
37	Shanly.....	Salem.....	Dufferin.....	" . . . . .	24-25	837
38	Sackville.....	King.....	Eastern . . . .	Asphalt block .	24	385.6
39	Sherbourne.....	Front. . . .	King.....	Vitrified block	18	273
40	Scollard.....	480 ft. w. of Yonge . . . .	Hazelton . . . .	Asphalt. . . . .	21	998.4
41	Scollard.....	Yonge . . . .	480 ft. w. of Yonge . . . .	" . . . . .	23	480
42	Sultan.....	St. Thomas . . . .	West end. . . .	" . . . . .	24	.....
43	Van Horne.....	Ossington. . . .	Dovercourt . . . .	" . . . . .	24	915
44	West Market . . . .	King.....	Front. . . . .	Asphalt block .	44	360
45	Wascana . . . .	Sumach . . . .	East end. . . .	Brick. . . . .	18	295.7
46	Winchester.....	Sumach . . . .	Danforth. . . .	Macadam re- construction.	24-30	4,140
						40,340.7
					Miles. . . . .	5 $\frac{3}{4}$

TABLE No. 11.  
PAVEMENTS—*Continued.*

City's Tender.	Next Lowest.		Cost of work not included in Ten- der.	Actual cost of work included in Ten- der.	\$	c.	Difference between actual cost and cost based on Con- tractor's next lowest Tender.										
	\$	c.													Gain.	Loss.	
327 00	1,127 00	1 65	244 16	245 81	1,128	65	882	84	.....								
8,372 00	8,647 00	154 66	7,665 81	7,820 47	8,801	66	981	19	.....								
771 00	773 81	11 49	755 98	767 47	785	30	17	83	.....								
2,988 00	3,117 00	200 58	2,216 23	2,416 81	3,317	58	900	77	.....								
3,572 00	3,589 00	149 59	2,590 15	2,739 74	3,738	59	998	25	.....								
3,450 00	3,590 00	59 67	3,078 58	3,138 25	3,649	67	511	42	.....								
2,242 00	2,355 00	92 18	2,164 71	2,256 89	2,447	18	190	29	.....								
4,318 00	4,396 00	328 67	3,267 85	3,595 92	4,624	07	1,128	15	.....								
2,474 00	2,709 00	188 80	2,257 38	2,446 18	2,897	09	451	62	.....								
961 00	1,046 00	12 42	791 31	803 73	1,058	42	254	69	.....								
5,010 00	5,038 00	83 60	3,921 91	4,005 51	5,121	69	1,116	09	.....								
6,230 00	.....	127 11	5,531 10	5,658 21	.....	.....	698	90	.....								
1,338 00	1,348 00	99 46	1,239 98	1,339 44	1,447	46	198	02	.....								
Order of Council.		50 00	14,374 65	4,424 65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		6,431 06	127,983 78	134,414 84											25,464 84	84 04	
															84 04		
														Net Gain.	25,380 80		

TABLE No. 12.

WORKS CONSTRUCTED AS LOCAL IMPROVEMENTS FROM 1892 TO 1908 (INCLUSIVE).

Class of Work.	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Asphalt.....	9	7	7	4	3	4	14	28	27	25	24	26	33	30	39	76	106
Asphalt Block.....	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	4	6
Bitulhthie.....	..	..	..	..	..	..	..	..	..	..	..	..	4	9	18	28	26
Brick.....	..	..	2	6	16	13	23	13	7	11	10	12	8	8	8	11	..
Gravel Roadways.....	..	..	..	..	16	..	1	1	..	..	..	..	..	..	..	..	..
Cobble Stone Pavem'ts	5	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Stone Setts.....	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..
Macadam Roadways.....	1	..	1	4	5	3	13	24	14	16	24	14	14	12	4	6	5
Tar Macadam Pavem'ts.....	..	..	..	..	..	..	..	..	1	1	6	12	8	9	2	2	..
Cedar Block Pavements.....	20	14	6	7	3	7	19	20	24	12	10	6	3	6	3	1	1
Concrete Pavements.....	..	..	3	..	..	1	..	..	..	..	1	2	1	2	2	6	8
Scoria Block.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Concrete & Stone Curb.....	..	..	..	..	..	..	..	..	..	1	3	4	6	15	23	42	93
Wood Curb.....	..	..	..	..	..	..	..	..	..	3	1	1	..	..	..	..	..
Concrete Walks.....	6	3	6	11	6	13	25	37	85	118	188	236	247	276	359	428	430
Brick Walks.....	..	..	..	1	8	14	4	1	2	1	..	..	1	1	1	..	2
Stone Flag Walks.....	1	1	..	..	..	..	..	..	..	..	..	..	2	2	1	2	6
Grading.....	..	..	..	..	..	..	..	..	..	..	..	..	2	..	4	..	..
Wood Block.....	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	4	..
Vitrified Block.....	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	13	13
	43	25	20	31	24	67	99	137	167	186	269	312	332	377	468	621	707

TABLE 14.  
CONCRETE CURBS.

Street.	Side.	From.	To.	Length.	Cost per Foot.	Actual Cost.	Extras Total Cost.	Gain.	
Balsam .....	N .....	Spadina .....	Charlotte .....	291	cts.	\$ c.	\$ c.	\$ c.	
Foxbar .....	S.-E. .....	Avenue Rd. ....	St. Clair .....	42	122	22	122	22	
Franklin .....	E .....	Ruskin .....	N. end .....	48 <sup>3</sup> / <sub>5</sub>	633	17	640	32	
" .....	W .....	Ruskin .....	Royce .....	32	540	13	540	13	
" .....	W .....	Edith .....	N. end .....	32	319	61	319	61	
Langley .....	N .....	Broadview .....	Logan .....	1,334.7	39 <sup>8</sup> / <sub>10</sub>	737	10	56	
" .....	S .....	" .....	" .....	1,953.9	40 <sup>1</sup> / <sub>2</sub>	777	78	34	
Manning .....	E .....	Robinson .....	Arthur .....	1,209.4	42	538	37	538	37
" .....	W .....	" .....	" .....	1,319.8	42	559	50	559	50
Ontario .....	E .....	Duke .....	Duchess .....	444.5	32	132	64	132	64
Parliament .....	E .....	Winchester .....	Wellesley .....	767.4	32	245	57	245	57
" .....	W .....	Prospect .....	" .....	376	32	120	32	120	32
Shanley .....	S .....	Salem .....	Hamburg .....	565.1	32	177	63	177	63
" .....	N .....	" .....	Dufferin .....	833	32	266	59	266	59
Tyndall .....	E .....	King .....	Springhurst .....	1,476	39	574	93	584	10
" .....	W .....	" .....	" .....	1,478.7	37 <sup>1</sup> / <sub>2</sub>	554	84	562	98
				Feet 17,142.7		6,453.77	47 03	6,500 80	200 63
				Miles 3 <sup>1</sup> / <sub>4</sub>					

# Repairs and Maintenance of Bridges, Wharves, Etc., 1908.

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CITY ENGINEER'S DEPARTMENT,

Toronto, December 31st, 1908.

MR. C. H. RUST,

*City Engineer:*

DEAR SIR,—Herewith I submit a statement of work done during the past year.

## LAMB'S BRIDGE.

Slight repairs only were done to the deck and handrailing of this bridge. The turning gear cleaned and adjusted.

The caretaker in charge of this bridge was on duty from April 22nd to December 24th, being nearly two months longer than in the previous year, owing to the open season. The bridge was kept in a clean and efficient working order during this time.

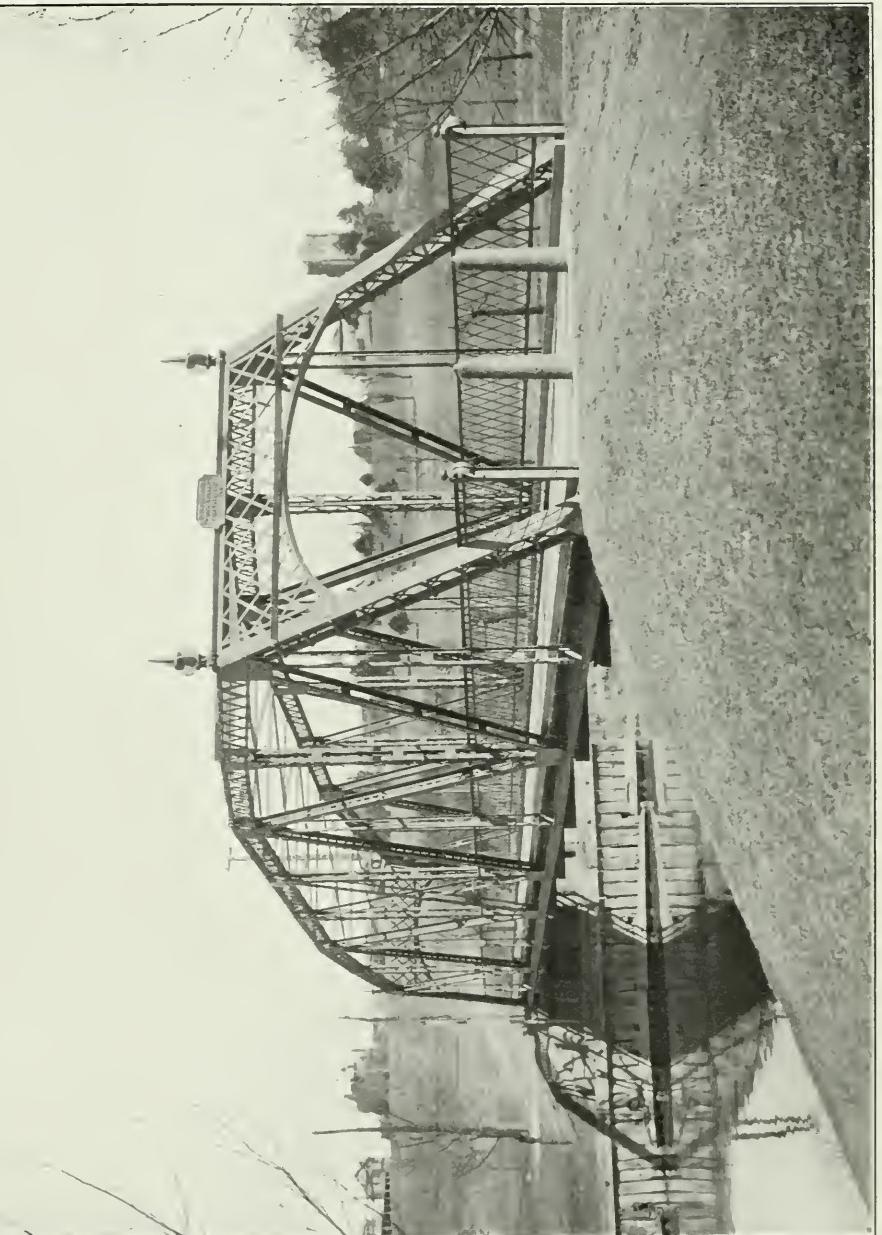
## CHERRY STREET BRIDGE.

One new wearing course was put on and the operating gear adjusted so that the bridge could be opened during the first freshets for the passage of ice. The centre pier and abutments are constantly altering in position from settlement, so that the bridge could not be opened without some considerable adjustment. As small an amount as possible is being spent on this bridge so as to keep it safe.

## RIVERDALE PARK FOOT BRIDGE.

A new steel bridge has been erected at this place, in one clear span of 120 ft. The present wood piling abutments were used, and will be replaced by concrete when required. The contractors were the Dickson Bros., of Campbellford, Ontario. The contract price was \$3,421. and \$133.84 was spent for altering the abutments and placing barriers to prevent vehicular traffic.

RIVERDALE PARK FOOT BRIDGE





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**POPLAR PLAINS ROAD BRIDGE OR CULVERT.**

The old structure of rough masonry and wood, which only occupied part of the roadway, was entirely removed and a new structure with concrete abutments and deck of steel beams, expanded metal and concrete has been erected occupying the entire width of the travelled road, and sidewalks; neat, substantial steel railings were erected on concrete parapets at each side. This was built by day labor and cost \$1,138.71.

**CRAWFORD STREET BRIDGE.**

This bridge was found to be in a dangerous state. The entire top portion of it down to 5 or 6 feet below the surface had to be removed and a new surface and handrailing constructed. There was about 2 feet of rise in the centre of the bridge. This was taken out and the deck laid to an even grade from the asphalt pavement at the south end to the block paving on Arthur Street, at the north end. The bents were repaired and new bracing put in; the undersills also were taken up and renewed where necessary.

**GLEN ROAD BRIDGE.**

Both the wearing course and the under-planking of this bridge were removed and renewed; new sidewalks also were put on.

**HUNTLEY STREET BRIDGE.**

The entire deck, both planking and joists, also sidewalks, were renewed.

**SHERBOURNE STREET BRIDGE.**

Some repairs to hand-railing only were done here.

**DUNDAS STREET BRIDGES.**

The deck of this bridge is in a very poor condition, and requires constant attention, and should be entirely renewed. This is an opportune time to consider widening these bridges to the full width of the street. Traffic is constantly increasing and is very much congested at the present time. An estimate has been submitted with this end in view:

**STRACHAN AVENUE BRIDGES.**

Some general repairs to decks and bents only.

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#### WINCHESTER STREET BRIDGE.

This bridge has been repaired and strengthened to carry it over the winter, but it must be replaced by a steel bridge or entirely rebuilt in the coming season.

#### GERRARD STREET BRIDGE.

The only repairs done to this bridge were to the hand-railing. It will require an entirely new wearing course in the coming season.

#### QUEEN STREET SUBWAY.

The galvanized iron shelter roof over the sidewalks was found to be sagging, being overloaded with rubbish and cinders from the railway. It was unloaded, straightened and repaired.

#### DUPONT STREET CULVERT.

The walls of this culvert were strengthened by new horizontal stays, and a new wearing course put on deck.

#### HUMBER RIVER BRIDGE.

No repairs were needed on this bridge; it will require new wearing course and re-painting during the coming season.

#### EASTERN AVENUE BRIDGE.

This bridge is in fair condition, but will require some considerable repairs and re-painting.

#### QUEEN STREET BRIDGE.

This bridge badly needs re-painting, otherwise it is in very good condition.

#### NORTH GLEN ROAD BRIDGE.

Some repairs and renewals are required to the deck planking, the several diagonal bracing-rods require tightening, otherwise the bridge is in good condition.

#### SUMMERHILL AVENUE BRIDGE.

This bridge is in fairly good condition, but will require some considerable repairs.

#### BINSCARTH AVENUE BRIDGE.

This bridge is very much decayed, and will require attention during the coming season.



LOOKING SOUTH IN SUBWAY



GENERAL VIEW LANSDOWNE AVE. SUBWAY



## CASTLE FRANK AVENUE BRIDGE.

This bridge was entirely removed.

## WALLACE AVENUE FOOTBRIDGE.

This bridge is in first-class condition, and will only require some slight repairs in the coming season.

## LANSDOWNE AVENUE SUBWAY.

The steel work for this subway began to arrive on the ground on the 1st of August, and as fast as it arrived was erected by the contractors' foreman. All the G. T. R. portion of the work was erected and in running order before the end of the year. The contractor for the substructure is digging out the main core of earth.

## DOCKS AND WHARVES.

*Yonge Street Wharf.*—A little repairs only have been done to this wharf, only sufficient to prevent accidents, but to the approaches thereto and the roadway alongside very considerable work has been done, and on that part of roadway near Lake Street.

## BAY STREET WHARF.

Some general repairs only were done here, and to the approaching sidewalks. The south and west sides are showing much depression on account of the heavy loading, especially of gravel on the south side.

## FERRY WHARF.

On account of the prevailing high water during the summer months, the sides had to be raised for a considerable distance, by 10-in. x 10-in. wood curbing, and the slips of access to boats altered and raised. New flooring was put on approaches to same.

## BROCK STREET WHARF.

Some general repairs only to deck planking and curbs.

## DUFFERIN STREET DUMP.

A man is kept here most of the year to check teams arriving and to spread the earth.

## ISLAND BRIDGES AND WHARVES.

*Turner's Baths Bridge.*—Some repairs and straightening were done here, so as to make it passable, but nothing more can be done; the bridge is only a heap of rottenness.

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#### MANITOU AVENUE WHARF.

This wharf was lowered into proper position and had some needed repairs.

#### WHARF AT SICK CHILDREN'S HOSPITAL.

This wharf had been considerably raised by the frost. It was lowered to somewhere near its old position and repaired.

#### WHARF AT WARD'S ISLAND.

The curb on this wharf had to be raised on account of high water.

#### CLANDEBOYE AVENUE BRIDGE.

This bridge, which was removed to allow the City Dredge to operate south, has been put back into its old position and temporarily repaired. It is the intention to replace it in the coming season by a movable structure of some kind.

#### ISLAND PARK WHARF.

The east wharf must be stripped, the piles re-driven, re-planked, and the north end sheeted.

#### PUBLIC CONVENIENCES.

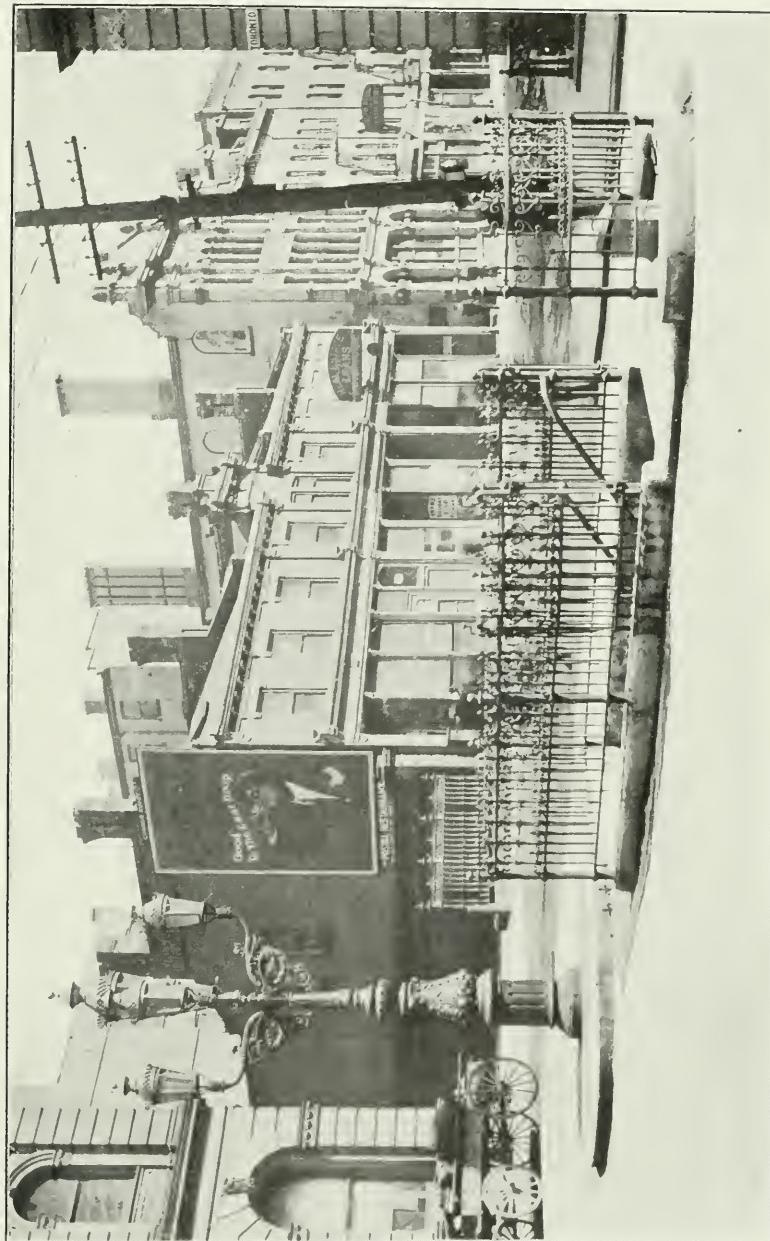
The two new lavatories at Yonge and Cottingham Streets, and at Queen Street and Spadina Avenue, have been kept in a clean and efficient manner during the year.

The Cottingham Street lavatory has been enlarged by the addition of a lavatory for women at its west end. The gas heater has been removed and a coal heater substituted so as to heat both lavatories, and placed in charge of the men's caretaker.

The lavatory at Adelaide and Toronto Streets has been thoroughly refitted, the access to same made more convenient: a neat hand-railing protects the stairway, and an ornamental lamp replaces the unsightly corrugated entrance.

The number of persons using these conveniences goes to show the great necessity of a number of these being installed in other parts of the City. The number using the convenience at Yonge and Cottingham Streets was 97,973; at Queen and Spadina, 579,085, and at Adelaide and Toronto Streets, 203,965, to which must be added the women's lavatory 2,511, making a total of 883,534 persons. This total is a

TORONTO ST. LAVATORY, NEW ENTRANCE





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little less than last year, owing to the lavatory at Toronto Street being closed for twelve weeks. The daily average for the year being 2,117. The largest attendance during one week occurred at Queen and Spadina on week ending December 20th, when 12,894 persons used this lavatory; at Adelaide and Toronto Streets, week ending April 4th, 6,321, and at Yonge and Cottingham Streets, on week ending September 6th, 2,490.

The contractor for the work of building the women's lavatory at Cottingham Street and resitting the one at Toronto Street was Mr. Harry Jennings, the contract price being \$5,243, with extras for installing new heating apparatus, totalling \$5,377.50. There must be added to this a sum of about \$550 for lamp, repairs to same, diverting gas main and electric light conduit, and wiring and fitting lavatory and lamp with electric lighting.

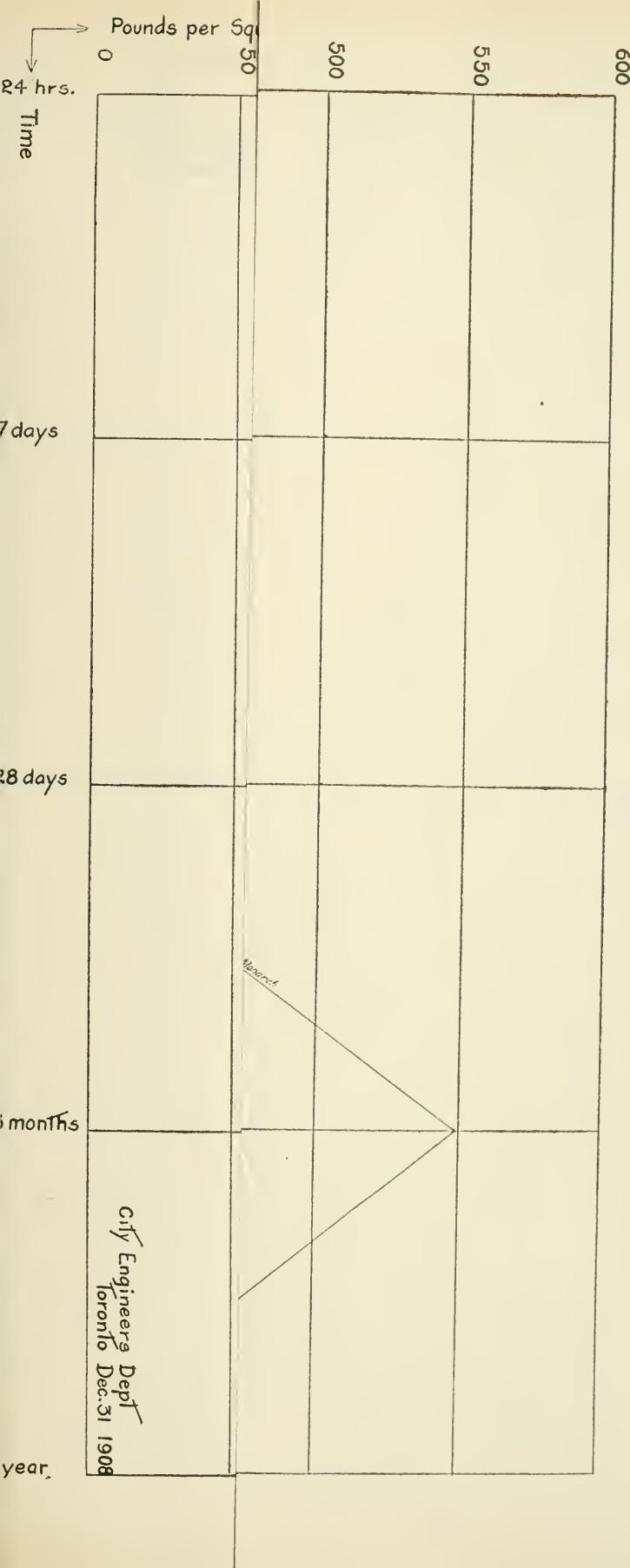
Respectfully submitted,

JOHN WILLIAMS,

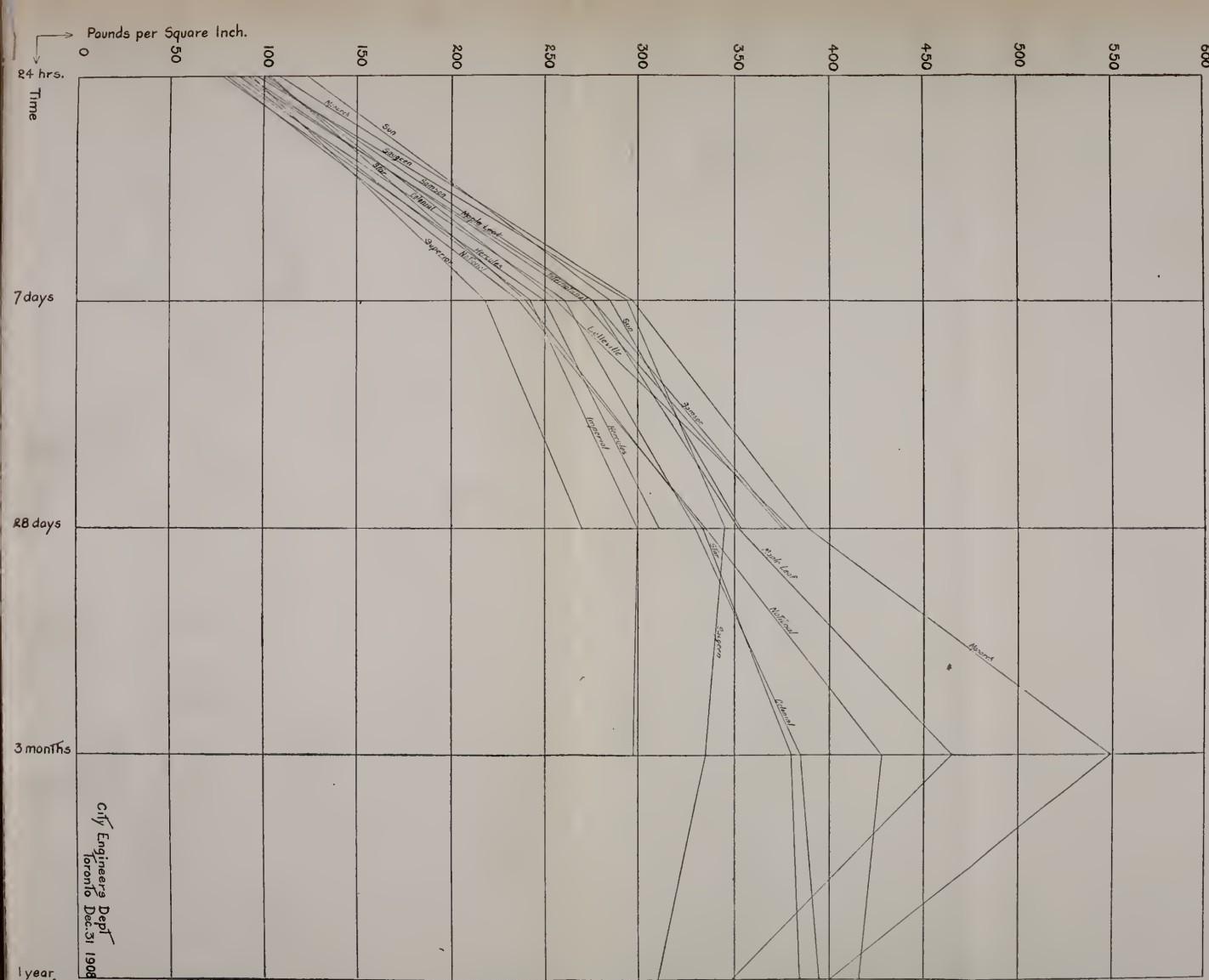
*Assistant Engineer.*



1908  
CEMENT TESTS  
3 parts Sand to 1 part Cement



1908  
CEMENT TESTS  
3 parts Sand to 1 part Cement



— NEAT CEMENT TESTS 1908 —

Pounds per Square Inch.

200

250

Merco

Asphalt

750

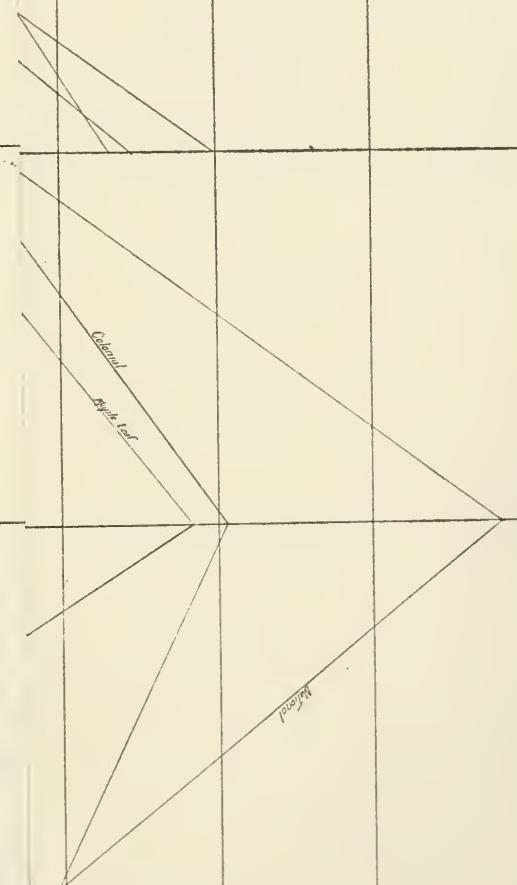
800

850

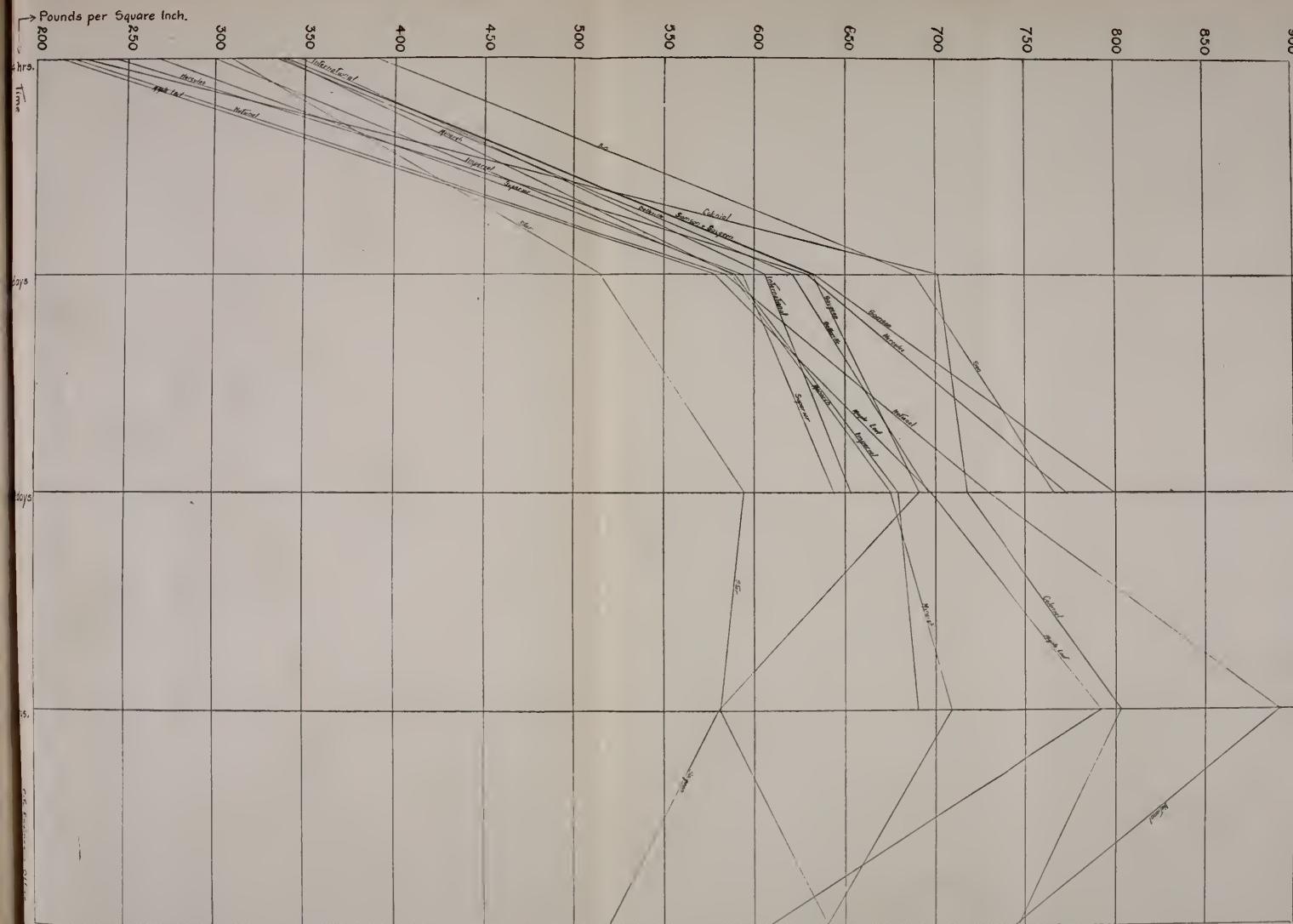
900

Cement  
Asphalt

Mort



— NEAT CEMENT TESTS 1908 —



Percent

0

17

18

19

20

21

22

23

, 1908.

ing in  
he De-

— CEMENT TESTS 1908 —

Fineness

Queen  
continu-  
r from

Natural  
International

to 300 mesh

**CEMENT TESTS 1908**

**Fineness**

23

22

21

20

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18

17

16

15

14

13

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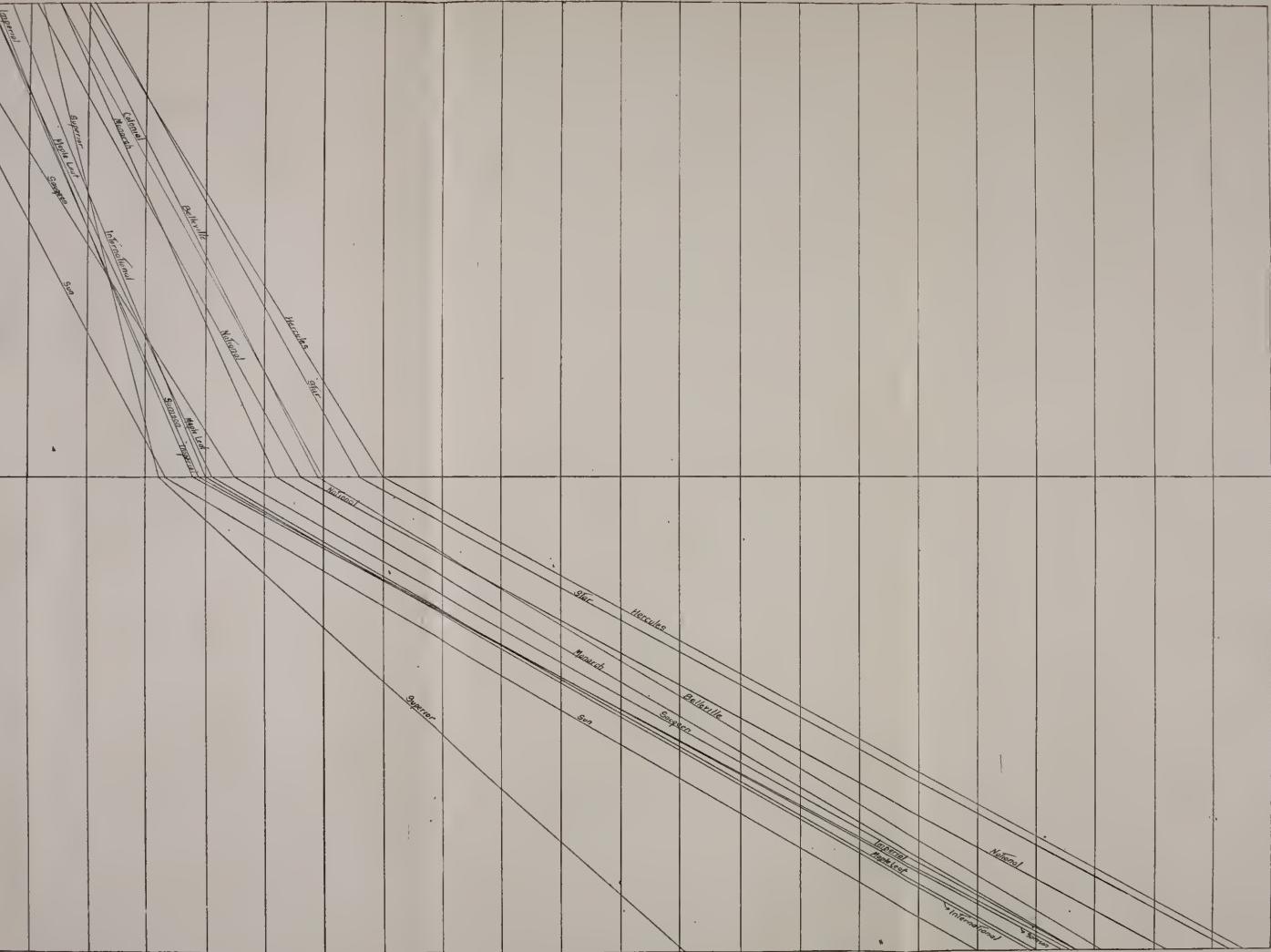
3

2

1

Percentage retained by Sieve

0



# Sewers, Drains and Special Works.

CITY ENGINEER'S DEPARTMENT.

Toronto, December 31st, 1908.

MR. C. H. RUST,  
*City Engineer.*

DEAR SIR.—Herewith I submit the Annual Report, showing in detail the work done under the supervision of this branch of the Department.

The following sewers were constructed during the year:

9-inch tile pipe .....	60	lin. ft.
12-inch tile pipe .....	25,024	"
15-inch tile pipe, in concrete .....	5,392	"
18-inch tile pipe, in concrete .....	1,612	"
24-inch tile pipe, in concrete .....	7,049	"
42-inch steel pipe .....	410	"
2 ft. x 3 ft. brick sewer .....	7,439	"
3-ft. 6-in. circular brick .....	1,203	"
12-inch x 12-inch box drain .....	150	"
	48,539	"

or 9.19 miles.

There are 275.01 miles of sewers in the City.

During the year there were:

- 188 new manholes built,
- 243 manholes repaired,
- 845 new gullies built,
- 503 gullies repaired.
- 108 miles of sewers flushed and cleaned.

There are 71 automatic flush tanks in the City.

## GENERAL SEWER REPAIRS.

During the year the old box drain on Leslie Street from Queen Street to Ashbridge's Bay, which has been requiring repairs continually for years back, was replaced by a 3 ft. 6 in. circular brick sewer from

Queen Street to the water's edge, and a 42-inch steel pipe carried out from this point on piles to the deep water, a special appropriation having been received to defray the cost of this work.

A 24-inch tile pipe overflow sewer was also laid on DeGrassi Street from Queen Street to Wardell Street, in order to obviate any further floodings which have so often occurred on DeGrassi Street and Wardell Street. A special appropriation was also received to carry out this work.

#### SEWERS WEST OF RONCESVALLES AVENUE.

During the summer of 1907 the York County Loan applied for a sewer system for their large stretch of residential property west of Roncesvalles Avenue lying between Queen Street and Bloor Street. In accordance with this request, the City Engineer, on August 30th, 1907, recommended the system on the initiative principle.

Just about the time tenders were to be called for the work, a siege of hard times occurred and the City Council ordered that the Engineer construct the system by day labor.

A full list of the sewers constructed will be found in table No. 2, and among them will be noticed that a syphon was constructed on the lower portion of Sunnyside Avenue and on Queen Street into the King Street sewer. This syphon is the first one built in Toronto, and is giving entire satisfaction.

#### WOODBINE SEWERAGE SYSTEM.

The above system was completed in 1907, and a full description of the work is given in the annual reports for 1906 and 1907. Since completion it has been found necessary to make additions to the system by constructing sedimentation basins on the up-stream side of the sewer at the Kenilworth Avenue pumping station and the Woodbine Avenue pumping station; each basin consists of a rectangular chamber 16 ft. x 14 ft., with baffle walls to intercept the sand and road detritus which were causing considerable trouble in the pump chambers and also in the septic tanks, the latter having had to be cleaned out twice since the completion of the system. These sedimentation basins appear to be answering the purpose for which they were constructed, in a satisfactory manner. It has also been necessary during the year to replace part of the main effluent carrier which was carried away by the storms and high water of the Spring.

TABLE NO. 1—SHOWING SEWERS CONSTRUCTED DURING 1908.

Street.	From.	To.	Size.	Description.	Length.	Average Diameter, in.	Concre- tum, No. P.D.	De- pt., in.	Soil.	Inspector.	Contractor.
Sunnyside Ave.	Geoffrey St. ....	Marmaduke St. ....	15 "	"	945	3 ....	58	10.40	s. & cl. wet	R. Hutcheson &	"
Sunnyside Ave.	Queen St. ....	Fern Ave. ....	24 "	"	2202	6 ....	95	10.51	sand & clay	A. Birks,	
Roncesvalles Ave.	Constance St. ....	Marmaduke Ave. ....	24 "	"	354	1 ....	15.80	sand	R. Patterson		"
Indian Rd.	Geoffrey St. ....	Marmaduke Ave. ....	15 "	"	1020	3 ....	68	11.37	run'g sand	R. Patterson	"
Fern Ave.	Sunnyside Ave. ....	Roncesvalles Ave. ....	12 "	"	564	2 ....	30	10.51	clay	R. Patterson	"
Garden Ave.	Sunnyside Ave. ....	Roncesvalles Ave. ....	12 "	"	560	2 ....	34	11.49	clay	R. Patterson	"
Galley Ave.	Sunnyside Ave. ....	Roncesvalles Ave. ....	12 "	"	550	2 ....	36	12.60	clay	R. Patterson	"
Pearson Ave.	Sunnyside Ave. ....	Roncesvalles Ave. ....	12 "	"	544	2 ....	32	10.61	clay	R. Patterson	"
Marion St.	Sunnyside Ave. ....	Roncesvalles Ave. ....	12 "	"	540	2 ....	30	9.99	clay	R. Patterson	"
Queen St.	Sunnyside Ave. ....	Sunnyside Ave. ....	24 "	"	613	2 ....	7.69	clay	R. Patterson	"	
Marmaduke St.	Roncesvalles Ave. ....	Indian Rd. ....	24 "	"	1059	4 ....	52	13.80	sand & clay	R. Patterson	"
Indian Rd.	Marmaduke St. ....	Hewitt Ave. ....	24 "	"	730	3 ....	23	11.44	sand	R. Patterson	"
Indian Rd.	Hewitt Ave. ....	a pt. 60 ft. s. of Bloor St.	18 "	"	1297	5 ....	58	13.37	sand	R. Patterson	"
Sunnyside Ave.	Marmaduke St. ....	Howard Pk. Ave. ....	12 "	"	355	1 ....	23	11.18	sand	A. Birks	"
Hewitt Ave.	Indian Rd. ....	East end. ....	12 "	"	271	0 ....	14	9.30	sand	Chas. North	"
Bostead Ave.	Indian Rd. ....	East end. ....	12 "	"	307	0 ....	19	7.67	sand	Chas. North	"
Badford Ave.	Indian Rd. ....	East end. ....	12 "	"	288	1 ....	18	9.88	sand	Chas. North	"
Thorold Ave.	Indian Rd. ....	East end. ....	12 "	"	290	1 ....	18	9.73	sand	Chas. North	"
Ridout St.	Indian Grove. ....	Indian Grove. ....	15 "	"	442	2 ....	15	12.87	sand	R. Patterson	"
Indian Grove.	a pt. 220 ft. s. of Ridout St.	Ridout St.	12 "	"	842	5 ....	43	8.65	sand	R. Patterson	"
Cleansing pipe for siphon under G.T.R. into the lake foot of Sunnyside Ave.		Cast iron	200	"	2 ....	....	7.00	clay	R. Patterson	"	

TABLE NO. 1—SHOWING SEWERS CONSTRUCTED DURING 1908.

Street.	From.	To.	Size.	Description.	Length. ft. in.	Depth in.	Soil.	Inspector.	Contractor.
Bowden St. ....	Danforth Ave. ....	12 in. 12 in.	Tile ..	11(6) ft. s. of a pt. 135 ft. fur. s.	5 ....	67 11.22	sand ...	T. Madigan .....	J. F. Connolly.
Castle Frank Cres. ....	a pt. 330 ft. s. of a pt. 330 ft. fur. s. Dule Ave. ....	12 in.	Brick ..	1246	5 ....	84 11.73	made grnd B. J. Loeman ... ch. sd	J. F. Connolly.	
Fawcett Ave. ....	Danforth Ave. ....	12 "	Tile ..	673	2	48 10.34	clay ...	Chas. North ....	J. H. McKnight Con. Co., Ltd.
Bedford Rd. ....	a pt. 241 ft. s. of Dupont St. ....	12 "	Brick ..	335	2	16 9.68	ashes, clay & hard ptn. Birds.	R. Patterson & A. City.	
Greenwoods Ave. ....	Queen St. ....	12 "	2 ft. x 3 ft. Brick	4145	16 25	216 12.56	lime & red f. J. Carrerets. ....	The Open Co.	
Ulster Ave. ....	Vankoughnet St. ....	12 in.	Tile ..	615	3	33 10.00	clay & sand ...	A. Birks. ....	J. F. Connolly.
Edgar Ave. ....	Schofield Ave. ....	15 "	Brick ..	1230	4	17 12.32	clay & gravel ...	J. F. Loeman. ....	J. F. Connolly.
Dupont St. ....	a pt. 700 ft. w. of Shaw St. ....	12 "	Brick ..	683	2	53 10.23	(wet) clay ...	W. W. Moss ...	Dominion Constr. Co.
Essex St. ....	a pt. 670 ft. e. of Shaw St. ....	12 "	Brick ..	722	2	34 10.33	rd. & bl. cl. T. Madigan & B. J. Maguire.		
Glen Rd. ....	Roxborough St. E. ....	2 ft. x 3 ft. Brick	800	2	35 13.55	rd. & bl. cl. T. Madigan & B. J. Maguire.			
Barrett Ave. ....	Chebucto Ave. ....	12 in.	Tile ..	165	1	12 8.72	clay ...	B. J. Loeman. ....	J. F. Connolly.
Fairbank Ave. ....	a pt. 93 ft. w. of Westondale Ave. ....	12 "	Brick ..	558	3	23 10.23	sand ...	Chas. North ....	J. H. McKnight Con. Co., Ltd.
Scarff Rd. ....	Chestnut Park Bd. ....	12 "	Brick ..	756	4	43 10.54	blue clay ...	F. W. Carrerette. ....	J. F. Connolly.
Foxbar Rd. ....	North end of Avenue Rd. ....	12 "	Brick ..	1278	7	77 12.02	clay ...	T. Madigan ...	J. F. Connolly.
Rowanwood Ave. ....	St. Clair Ave. ....	12 "	Brick ..	394	6	1.98	clay ...	Chas. North ....	J. F. Connolly.
Loring St. ....	Surfice drain at Rowanwood Ave. ....	15 "	Brick ..	1175	4	67 11.40	clay ...	Chas. North ....	J. F. Connolly.
Uther Ave. ....	Yonge St. ....	12 "	Pox	864	4	58 5.43	clay & fillg. W. W. Moss ...	J. H. McKnight Con. Co., Ltd.	
Whitney Ave. ....	Clutter St. ....	12 in.	Tile ..	620	2	40 9.76	clay ...	T. Madigan ...	J. F. Connolly.
Leslie St. ....	Roxborough St. E. ....	12 in.	Brick ..	1065	3	18 10.49	clay ...	W. W. Moss ...	J. F. Connolly.
Ashbridge's Bay ...	Queen St. ....	3 ft. 6 in. eir. 42 in.	Steel	1203	1	53 5.54	red clay ...	J. F. Carrerette & Peter Arnok.	
Grace St. ....	a pt. 400 ft. s. of Kiplow Ave. ....	12 "	Tile ..	410	1	27 13.85	clay ...	F. J. Gibson. ....	J. F. Connolly.
Fitzroy Ave. ....	Queens Ave. ....	12 "	Brick ..	655	3	46 11.53	sand & clay ...	T. Madigan ...	J. F. Connolly.
Hastings Ave. ....	Queens St. ....	12 "	Brick ..	1308	6	96 6.42	clay ...	W. W. Moss ...	J. F. Connolly.
Shaw Place. ....	Queens Ave. ....	12 "	Brick ..	60	1	6 8.49	hard clay ...	W. W. Moss ...	J. F. Connolly.
Oriole Rd. ....	Deel Ave. ....	12 "	Brick ..	423	1	28 9.75	clay & loam	Chas. North ....	J. F. Connolly.
St. Clair Ave. ....	King St. ....	12 "	Brick ..	401	2	3 17 11.86	clay ...	W. W. Moss ...	J. F. Connolly.
Eascan Ave. ....	Manning Ave. ....	12 "	Brick ..	625	2	1 18 9.86	clay & sand	Chas. North ....	J. F. Connolly.
Follis Ave. ....	a pt. 240 ft. s. of College St. ....	12 "	Brick ..	290	2	1 29 10.94	sand ...	F. J. Carrerette. ....	J. F. Connolly.
College Place. ....	a pt. 80 ft. s. of Goldfin Ave. ....	12 "	Brick ..	404	2	18 10.98	sand & clay	Chas. North ....	J. F. Connolly.
Silver Ave. ....	Oriole Rd. ....	12 "	Brick ..	460	1	37 13.71	sand & clay (v. wt.)	R. Patterson. ....	J. F. Connolly.
St. Clair Ave. ....	East City limits. ....	12 "	Tile ..	235	2	9 11.54	sand ...	R. Patterson. ....	J. F. Connolly.
Orile Rd. ....	West and ...	12 "	Brick ..	493	2	29 13.93	sand ...	T. Madigan ...	J. F. Connolly.
Heath St. ....	Wardell St. ....	12 "	Brick ..	542	2	20 10.46	day ...	W. W. Moss ...	J. F. Connolly.
Thorold St. ....	Present terminus. ....	12 "	Brick ..	600	1	4 10.02	day ...	W. W. Moss ...	J. F. Connolly.
DeGrossi St. ....	a pt. 60 ft. e. of Wardell St. ....	12 "	Brick ..	486	3	36 7.63	day ...	W. W. Moss ...	J. F. Connolly.
Hagan St. ....	Wallace Ave. ....	12 "	Brick ..	315	1	4 16 12.83	day ...	R. Patterson. ....	J. F. Connolly.
Ash St. ....	n. of Lappin Ave. ....	12 "	Brick ..	2494	8	40 14.36	s'd cl. & lm	Chas. North ....	J. H. McKnight Con. Co., Ltd.
Elmendorf Ave. ....	Wallace Ave. ....	12 "	Brick ..	190	1	10 10.75	sand ...	R. Patterson. ....	J. F. Connolly.
Greenwoods Ave. ....	Garrison Creek ...	12 in.	Tile ..	In progress ...	....	....	....	R. Patterson. ....	J. F. Connolly.
Radford Ave. ....	Brook Ave. ....	12 "	Brick ..	10 ft. progress ...	....	....	....	W. W. Moss ...	J. F. Connolly.
Wight Ave. ....	Alhambra Ave. ....	12 "	Brick ..	584	3	38 10.07	made grnd	Chas. North ....	J. F. Connolly.
High Park Bonley's Sunnyside Ave. ....	Sunnyside Ave. ....	12 "	Brick ..	605	3	38 11.96	grnd & cl. A. Birks. ....		
Geoffrey St. ....	Rouenvalles Ave. ....	12 "	Brick ..	587	2	40 11.50	s. & cl. (wet) Chas. North ....		
Geoffrey St. ....	Indian Rd. ....	15 "	Brick ..	580	3	32 11.96	s. & cl. (wet) Chas. North ....		
Walter St. ....	Rouenvalles Ave. ....	12 "	Brick ..	586	2	40 11.19	s. & cl. (wet) Chas. North ....		
Constance St. ....	Rouenvalles Ave. ....	12 "	Brick ..	600	1	40 6.38	s. & cl. (wet) Chas. North ....		
Sunnyvale Ave. ....	Rouenvalles Ave. ....	12 "	Brick ..	1155	4	71 12.36	hard clay ...	G. Parsons & R. Hutchison. ....	
Marion St. ....	Geoffrey St. ....	15 "	Brick ..	945	3	58 10.40	s. & cl. (wet) R. Birks. ....		
Sunnyvale Ave. ....	Marmaduke St. ....	12 "	Brick ..	2292	6	95 10.51	sand & clay	R. Birks. ....	
Rouenvalles Ave. ....	Fern Ave. ....	24 "	Brick ..	3254	1	15 9.50	sand ...	R. Birks. ....	
Constance St. ....	Marmaduke Ave. ....	24 "	Brick ..	1020	2	68 11.87	run g sand	W. W. Moss ...	
Indian Rd. ....	Geoffrey St. ....	24 "	Brick ..	730	3	23 11.44	sand ...	R. Birks. ....	
Indian Rd. ....	Marmaduke St. ....	24 "	Brick ..	1297	5	58 13.47	sand ...	R. Birks. ....	
Sunnyvale Ave. ....	Hewitt Ave. ....	60 ft. s. of Bloor St. ....	Brick ..	564	2	34 11.49	clay ...	R. Birks. ....	
Garden Ave. ....	Rouenvalles Ave. ....	12 "	Brick ..	560	2	36 12.60	clay ...	R. Birks. ....	
Clifford Ave. ....	Sunnyvale Ave. ....	12 "	Brick ..	350	2	32 10.61	clay ...	R. Birks. ....	
Fairbank Ave. ....	Sunnyvale Ave. ....	12 "	Brick ..	544	2	30 9.99	clay ...	R. Birks. ....	
Marion St. ....	Rouenvalles Ave. ....	12 "	Brick ..	540	2	7.69	clay ...	R. Birks. ....	
Queen St. ....	Sunnyvale Ave. ....	24 "	Brick ..	613	2	....	....	R. Birks. ....	
Marmaduke St. ....	Rouenvalles Ave. ....	24 "	Brick ..	1059	4	52 13.80	Chambers	R. Birks. ....	
Indian Rd. ....	Constance St. ....	24 "	Brick ..	730	3	23 11.33	sand ...	R. Birks. ....	
Indian Rd. ....	Hewitt Ave. ....	18 "	Brick ..	1297	5	58 13.47	sand ...	R. Birks. ....	
Sunnyvale Ave. ....	Marmaduke St. ....	12 "	Brick ..	355	1	23 11.13	sand ...	R. Birks. ....	
Hewitt Ave. ....	Indian Rd. ....	12 "	Brick ..	271	0	14 9.30	sand ...	R. Birks. ....	
Clifford Ave. ....	Indian Rd. ....	12 "	Brick ..	307	1	18 9.88	sand ...	R. Birks. ....	
Ridout St. ....	Indian Rd. ....	12 "	Brick ..	288	1	18 9.73	sand ...	R. Birks. ....	
Indian Grove. ....	a pt. 520 ft. n. of Ridout St. ....	12 "	Brick ..	290	1	15 12.87	sand ...	R. Birks. ....	
Cleaning pipe for syphon under G.T.R. into the lake foot of Sunnyside Ave. ....	12 "	Brick ..	412	2	43 8.65	sand ...	R. Birks. ....		
			842	5	43 7.00	clay ...	R. Birks. ....		
			200	2	....	....	R. Patterson. ....		

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TABLE NO. 2.

## SHOWING COST OF SEWERS CONSTRUCTED BY DAY LABOR DURING 1908.

Street.	From.	To.	Size.	Description.	Length.	City's Tender.	Next Lowest Tender.	Total cost of work exclusive of interest.	Difference between actual cost and lowest Contractor's Tender.	
									Loss.	Gain.
Bedford Road.....	A point 241 ft. s. of Dupont St.	Davenport Road.	12 in.	Tile ..	335	\$ 650 00	\$ 678 00	\$ 601 86	.....	\$ 76 14
Ulster Ave.....	College St.....	Vankoughnet St.	12 " "	" ..	615	No Tender	.....	.....	.....	.....
Leslie St.....	Ashbridge's Bay..	Queen St. ....	3' 6" circular	Brick. ....	1,203	..	.....	.....	.....	.....
Foxbar Road.....	Surface drain.....	.....	24 in.	Tile ..	394	..	.....	.....	.....	.....
De Grassi St.....	Queen St. ....	Wardell St. ....	24 "	" ..	542	..	.....	.....	.....	.....
Hagerman St.....	Present terminus	A point 60 ft. e.	9 "	" ..	60	..	.....	.....	.....	.....
Shaw Place.....	A point 450 ft. w. of Shaw St. ....	A point 60 ft. w. ....	12 "	" ..	60	..	.....	.....	.....	.....
Dovercourt Road.....	Garrison Creek	Shanion St. ....	12 "	" ..	190	..	.....	.....	.....	.....
Wright Ave.....	Sunnyside Ave.	Roncesvalles Ave	12 "	" ..	584	..	.....	.....	.....	.....
High Park Boulev'd	Sunnyside Ave.	Roncesvalles Ave	12 "	" ..	605	..	.....	.....	.....	.....
Geoffrey St.....	Sunnyside Ave.	Roncesvalles Ave	12 "	" ..	587	..	.....	.....	.....	.....
Geoffrey St.....	Sunnyside Ave.	Indian Road	15 "	" ..	580	..	.....	.....	.....	.....
Walter St.....	Sunnyside Ave.	Roncesvalles Ave	12 "	" ..	586	..	.....	.....	.....	.....
Constance St.....	Sunnyside Ave.	Roncesvalles Ave	12 "	" ..	600	..	.....	.....	.....	.....
Sunnyside Ave.....	Fern Ave. ....	Geoffrey St. ....	24 "	" ..	1,155	..	.....	.....	.....	.....
Sunnyside Ave.....	Geoffrey St. ....	Marmaduke St. ....	15 "	" ..	945	..	.....	.....	.....	.....
Sunnyside Ave.....	Queen St. ....	Fern Ave. ....	24 "	" ..	2,202	..	.....	.....	.....	.....
Roncesvalles Ave.....	Constance St. ....	Marmaduke St. ....	24 "	" ..	354	..	.....	.....	.....	.....
Indian Road.....	Geoffrey St. ....	Marmaduke St. ....	15 "	" ..	1,020	..	.....	.....	.....	.....
Fern Ave.....	Sunnyside Ave.	Roncesvalles Ave	12 "	" ..	564	..	.....	.....	.....	.....
Garden Ave.....	Sunnyside Ave.	Roncesvalles Ave	12 "	" ..	560	..	.....	.....	.....	.....
Galley Ave.....	Sunnyside Ave.	Roncesvalles Ave	12 "	" ..	550	..	.....	.....	.....	.....
Pearson Ave.....	Sunnyside Ave.	Roncesvalles Ave	12 "	" ..	544	..	.....	.....	.....	.....
Marion St. ....	Sunnyside Ave.	Roncesvalles Ave	12 "	" ..	540	..	.....	.....	.....	.....
Queen St. ....	Roncesvalles Ave	Sunnyside Ave.	24 "	" ..	613	..	.....	.....	.....	.....
Marmaduke St. ....	Rouncesvalles Ave	Indian Road	24 "	" ..	1,059	..	.....	.....	.....	.....
Indian Road.....	Marmaduke St. ....	Hewitt Ave. ....	24 "	" ..	730	..	.....	.....	.....	.....
Ridout St. ....	Hewitt Ave. ....	A point 60 ft. s. of Bloor St. ....	18 "	" ..	1,297	..	.....	.....	.....	.....
Sunnyside Ave.....	Marmaduke St. ....	Howard Park Ave	12 "	" ..	355	..	.....	.....	.....	.....
Hewitt Ave. ....	Indian Road	East end.....	12 "	" ..	271	..	.....	.....	.....	.....
Boustead Ave. ....	Indian Road	East end.....	12 "	" ..	307	..	.....	.....	.....	.....
Radford Ave. ....	Indian Road	East end.....	12 "	" ..	288	..	.....	.....	.....	.....
Thorold Ave. ....	Indian Road	East end.....	12 "	" ..	290	..	.....	.....	.....	.....
Ridout St. ....	Indian Road	Indian Grove....	15 "	" ..	442	..	.....	.....	.....	.....
Indian Grove.....	A point 220 ft. s. of Ridout St. ....	A point 520 ft. n. of Ridout St. ....	12 "	" ..	842	..	.....	.....	.....	.....
Cleaning pipe for	syphon under G.T.	R. into lake, foot of Sunnyside Ave.	12 "	Cast Iron	200	"	.....	.....	.....	.....

In addition to the above, baffle boards have been placed in septic tank No. 3, upon the suggestion of Dr. Amyot, Provincial Bacteriologist.

#### LOCAL IMPROVEMENT SEWERS.

Table No. 1 shows in detail the number of local improvement sewers constructed during the year.

Table No. 2 gives a list of those constructed by day labor.

#### DREDGING SEWAGE DEPOSITS OUT OF SLIPS.

Sewage deposits were dredged from the following slips during the year:

Yonge Street sewer outlet .....	1,210½ cu. yds.
Church Street " .....	1,972 "
Jarvis Street " .....	2,499 "
Sherbourne Street " .....	2,499
Berkeley Street " .....	4,998 "
Parliament Street " .....	6,146½ "
 Total .....	 19,325 "

The following table shows the number of lineal feet of private drains constructed during the year:

	6-in.	9-in.	12-in.
January .....	1,921	33	—
February .....	1,426	66	—
March .....	4,521	439	—
April .....	6,842	652	—
May .....	7,355	632	—
June .....	7,533	450	—
July .....	6,236	491	33
August .....	6,475	456	33
September .....	5,879	533	—
October .....	7,567	702	—
November .....	4,891	468	—
December .....	2,689	129	30
 Total .....	 63,335	 5,051	 96

A total of 68,482 feet, or 12.97 miles.

In addition to the above, there were

- 77 private drains repaired.
- 53 private drains flushed.
- 14 private drains lowered.

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 RAILWAY CROSSINGS.

There are eighty-two railway crossings in the City. During the year, by order of the Dominion Railway Board, gates were placed at the following points:

Front Street, at entrance to freight sheds—G. T. R.  
 Jameson Avenue—G. T. R.  
 Bloor Street—G. T. R. Northern Division.  
 Winchester Street at the Don—C. N. Railway.

Total number protected by gates and watchmen, 24.

The gates are all in good working order.

At Church Street and Esplanade, by order of the Railway Board, the G. T. R. has to keep a watchman from 7 o'clock a.m. to 7 o'clock p.m. from April 15th to November 15th, Sundays excepted.

Two crossings have been added during the year, viz:—Lansdowne Avenue, protected by a subway, not yet completed, and Main Street, East Toronto, protected by a bridge.

All these crossings were inspected at intervals during the year. Several were found to be in need of repairs, and upon being notified, the railway companies promptly did what was required to put them in a safe condition.

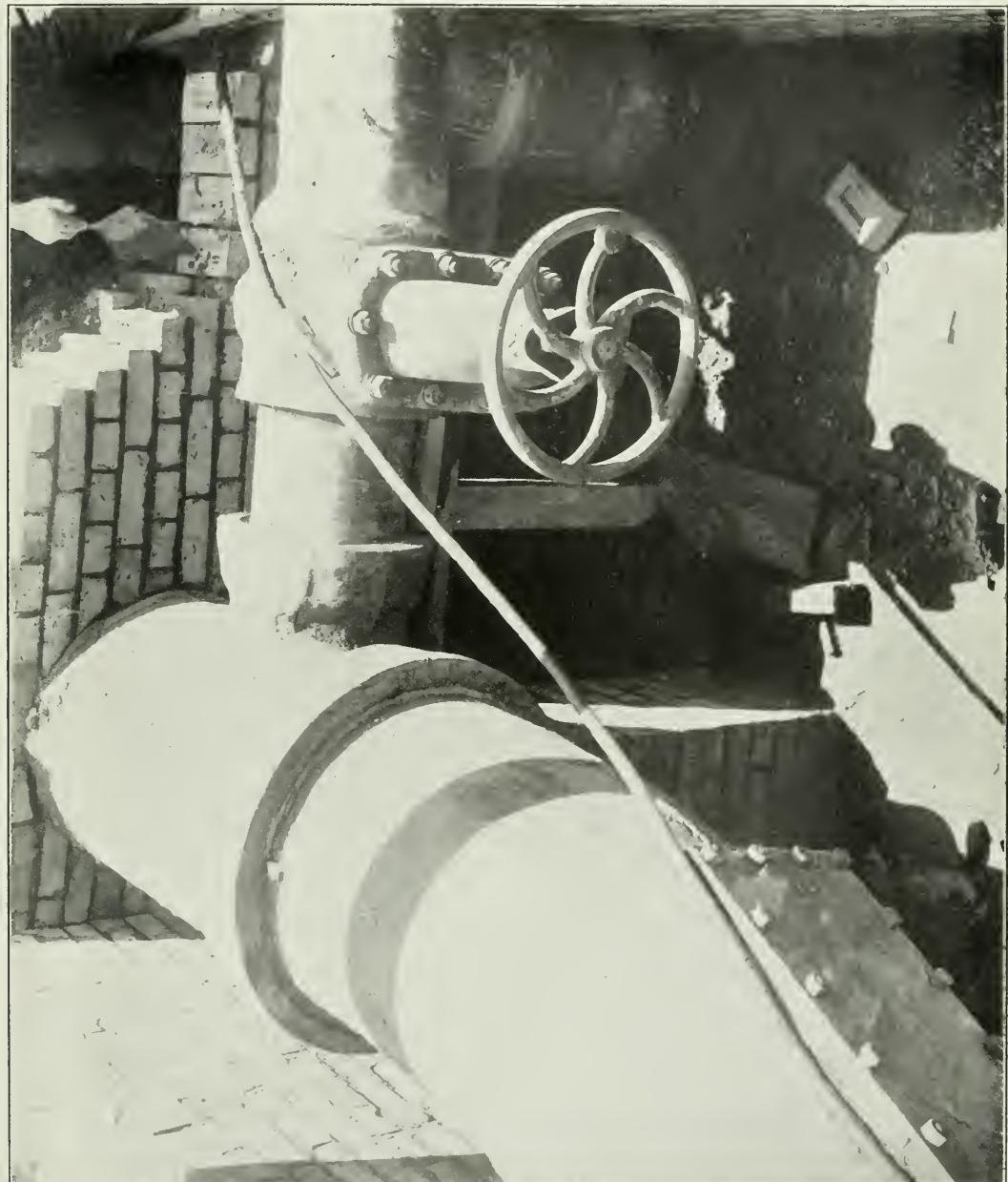
## SUMMARY.

Crossing protected by watchmen only .....	8
"      "      gates .....	24
"      "      bells .....	3
"      "      bridges .....	8
"      "      subways .....	5
Crossings unprotected .....	34
 Total number of crossings .....	82

The Toronto Railway Company have renewed the following tracks during the year:

	feet.
College St., McCaul St. to Spadina Avenue, both tracks .....	3,378
Spadina Ave., Knox College to Bloor, east track .....	2,292
Queen St., Bathurst to Dundas, both tracks .....	8,039
Front St., Yonge to Church, both tracks .....	1,800

FLUSHING VALVE, SEWER SYPHON, QUEEN ST. AND SUNNYSIDE AVE.





	feet.
Front St., York to Simcoe .....	620
King St., Spadina to Bathurst, both tracks .....	3,800
Yonge St., College to Carlton .....	590
These are 7-in. 90 lb. girder rail.	
Bloor St., Dufferin to Lansdowne .....	3,892
7-in. 70 lb. T-rail.	

303 iron trolley poles have been erected during the year, 28 moved, and 244 painted.

During the year the Toronto Railway Company have erected iron trolley poles on the following streets:—

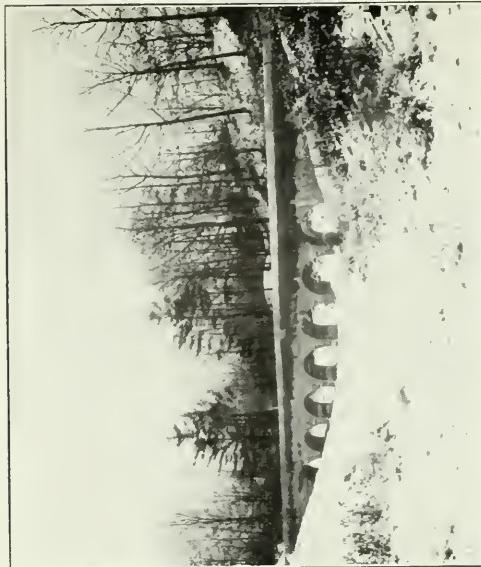
on Bloor Street, from Dufferin to Lansdowne,	36
on Scollard Street .....	11
on Gerrard Street, from Parliament to River .....	33
on Gerrard Street, from Logan to 700 feet east .....	15
on Dundas Street, from Ossington to Bridges .....	94
on Howard Park Avenue .....	34
on Roncesvalles Avenue .....	80

The following is a list of the trolley poles moved by the company:—

Broadview and Danforth .....	1
Springhurst Avenue .....	1
Glen Road .....	1
King and Dufferin .....	1
Montrose and College .....	1
Queen and Lee Avenue .....	1
Avenue Road .....	6
Dovercourt Road, north of Bloor .....	5
Gerrard, Logan, 700 feet east .....	4
Queen and Armour .....	1
Dundas and Lynd .....	2
Roncesvalles, north of Queen .....	1
Dundas and Roncesvalles .....	1
Bathurst, North of King .....	1
Queen and Elmer .....	1

## TELEPHONE POLES ERECTED DURING 1908.

Street.	No. of Poles.	
Havelock St., w.s. ....	7 poles.	1 stub.
Avenue Road, w.s. ....	6 "	1 "
Heath St., n.w. cor. Avenue Rd. ....		1 "
Montrose Ave., e.s. ....	4 "	1 anchor
Manning Ave., w.s. ....	12 "	1 "
Palmerston Avenue ....	3 "	
Dupont Street ....	3 "	
Woodbine Avenue ....	9 "	
Havelock Street ....	4 "	
Jones Avenue ....	1 "	
Clarendon or Schiller ....	7 "	
Russill Hill Road ....	1 "	
Waverley Road ....	4 "	
Cor. Knox and Eastern ....		1 stub.
Gerrard Street ....	3 "	1 "
Wright Avenue ....	4 "	1 "
Montrose Avenue ....	2 "	
Leslie Street ....	12 "	1 " 1 anchor
Olive Avenue ....	5 "	1 "
Davenport Road ....	2 "	1 "
Simcoe Street ....	3 "	
Chicora Avenue ....	7 "	2 "
Dewson Street ....	1 "	1 "
Dovercourt Road ....	3 "	1 "
Bloor Street ....	1 "	
Sinclair, e.s., south from Conduit ....		3 poles.
Parkway Ave., w.s., south from Dundas ....		5 "
Lane east off Vanauley, south of Grange, north side ....		3 "
Pears Avenue ....		4 "
Shanly, s.s., west from Dovercourt ....		3 "
Dovercourt Rd., e.s., north of Shanly ....		5 "
Hallam, s.s., east of Ossington ....		5 "
Beatrice, w.s., north of Arthur ....		7 "
Gerrard, n.s., east of Jones ....		3 "
Cross St., s.s., east from Gladstone ....		2 "
Victor Ave., n.s., east from Broadview ....		8 "
Abbott Ave., s.s., west of Dundas ....		6 "
Wallace Ave., s.s., from Symington to G. T. R. tracks ....		8 "
College St., n.s., west of Sorauren ....		7 "
Geoffrey St., s.s., continuing lead to Roncesvalles Avenue ....		5 "
Ridout St., n.s., Indian Road to Indian Grove ....		4 "
Indian Grove Ave., north from Ridout ....		3 "
Carlaw Ave., north from Queen ....		7 "
Fern Ave., extending lead to Roncesvalles ....		5 "



COMPLETED



LAYING PIPE



SHUTTING FORMS

CONCRETE ARCHED SUPPORT FOR 24-INCH TILE SEWER ON SUNNYSIDE AVE.



Alhambra Ave., north of Boustead .....	5 poles.
Follis Ave., n.s., Clinton to Christie .....	3 "
Greenwoods, w.s., Falstead to Danforth .....	14 "
Clinton, w.s., north of Follis .....	4 "
Binscarth Rd., s.s., opp. Sir William Meredith's res.....	1 "
Gerrard St., s.s., Parliament to Sackville .....	7 "
Poplar Plains Rd., w.s., Balmoral to 2 poles north of Lynwood....	5 "
Conduit St., s.s., Dundas to City Limit .....	3 "
Shanly St., n.s., west from Gladstone .....	2 "
Dearbourne, n.s., east from Broadview .....	6 "
Wolfrey, s.s., east from Broadview .....	8 "
Pearson, s.s., extending lead to Roncesvalles .....	5 "
Thorold, s.s., east from Indian Road .....	3 "
Garden Avenue, s.s., west from Sorauren .....	3 "
Empress Crescent, n.s., continuing lead west from Dowling.....	3 "
Laxton Avenue, s.s., west from Jameson .....	6 "
Road west of Keating's Channel, n.s.....	4 "
Warren Road, s.s., Clarendon to north of Lynwood.....	8 "

## BELL TELEPHONE POLES MOVED DURING 1908.

Street.	From.	No. Poles.
Avenue Road.....	W.s. Eduund to St. Clair .....	3.
S.e. cor. Clinton and	Bloor .....	1 & 1 stub.
Mutual .....	167 ft. n. Carlton to 75 s. Maitland	9.
Broadview Ave.....	Simpson to Withrow .....	1 stub.
Davenport Road ....	Dupont to Bedford .....	1 stub.
Czar, s.s .....	Yonge to North ...	2 stubs.
Major .....	Cor. of Bloor.....	1 pole.
Dalhousie .....	Shuter to Gould .....	14 & 1 stub.
Poplar Plains Road ..	Edmund to McPherson .....	6.
John .....	King to Wellington .....	8 & 1 stub.
Shaw .....	Arthur to College..	17 & 2 stubs.
Avenue Road.....	Old City limits north .....	19
Wells .....	Kendall to Bathurst .....	{ 5 & 1 stub.
Palmerston Ave.....	Brunswick to Howland.....	
Bathurst.....	Cor. Robinson .....	1.
Front .....	Opp. Adelaide .....	1.
Scarborough .....	Yonge to Bay .....	5.
Harbord .....	140 ft. n. of Chestnut Park Road.	1.
Castle Frank Ave....	Huron to Spadina .....	2.
Saulter .....	McKenzie Cres. to limit Lot No. 16	5.
Ashdale Ave .....	Queen to Eastern Ave .....	12 & 2 anchors.
Lee Ave .....	Cor. Queen.....	1.
Rusholme Road .....	Queen to City limits.....	2.
Gerrard .....	College to Dundas.....	3.
Niagara .....	Parliament to River.....	8 & 1 stub.
	Bathurst to Tecumseh .....	4 & 1 stub.

BELL TELEPHONE POLES MOVED DURING 1908—*Continued.*

Street.	From.	No. Poles,
N. w. cor. Clarke and	Bolton.....	1 & 1 stub.
Grange Road .....	McCaull to Beverley.....	1 & 1 stub.
Baldwin .....	Spadina to Kensington .....	1 & 1 stub taken out.
Defoe .....	Shaw to Niagara .....	8 & 1 stub.
Grace .....	1,494 ft. n. College to 410 ft. north	23.
Howard .....	Glen Road to Parliament .....	3 & 1 stub.
N.w. cor. Harcourt &	Pape .....	1.
Sinnach .....	Gerrard to Spruce.....	6.
Oriole Road .....	St. Clair to Heath .....	4, 1 stub & 1 anchor.
Shaw .....	West side .....	6.
Dovercourt Road and	Van Horne.....	1.
Don Esplanade .....	.....	1 & removed 1.
Greenwoods Ave.....	.....	1.
Hayter, n.s .....	.....	13.
Scollard .....	Yonge to Hazelton .....	10 & 1 anchor.
Hogarth Ave .....	East from Broadview .....	13, 2 stubs & 1 anchor.
Woodlawn Ave .....	N.e. cor. of west end .....	1.
Eastern Ave .....	Cor. Saulter .....	2.
Springhurst Ave., opp.	Tyndali .....	1.
DeGrassi .....	Queen to Wardell .....	2 & 1 stnb.
Britain .....	Cor. George .....	1.
Dundas .....	Ossington Ave. to Rusholme Rd..	6.
St. Helens Ave .....	Dublin to Bloor.....	5.
Cor. Howard Park Av.	and Roncesvalles .....	1 stub.
Brock Ave .....	In way of G.T.R. tracks .....	1 stub.
Bellair .....	Cumberland to Yorkville.....	1 stub.
Cor. Collier St. and	Park Road.....	1 stub.
Broadview Ave. and	Langley .....	2 anchors, gnys, etc.
Beaconsfield Ave., e.s.	Dundas to Afton .....	13 poles.
Cor. Spruce & Sunrich	.....	2 stubs.
Starr Ave., at bend in	street .....	2 poles.
Bloor, for new railway	gates of G.T.R .....	1.
Dundas .....	Lansdowne to St. Helen's .....	3.
Cor. Davenport and	Bedford Roads .....	1 stub.
Greenwoods Ave. e.s.,	north railway tracks .....	6 & 2 anchors.
Hamburg Ave., cor.	Van Horne .....	1 stub.
Parkway Ave., cor.	Dundas .....	1 stub.
Yonge and Balliol .....	.....	1 pole.
Hawthorne and Briar Hill .....	.....	1 pole.
Avenue Road .....	350 ft. n. of Balmoral to St. Clair ..	1 pole.

## TELEPHONE POLES PAINTED DURING 1908.

Street.	No. Poles.
Bathurst Street .....	55
Dupont Street .....	18
Barton Avenue .....	11
Ulster Avenue .....	23
Brunswick Avenue .....	36
Bloor Street .....	61
Manning Avenue .....	24
Davenport Road .....	2
Robert Street .....	33
Sussex Avenue .....	3
Clinton Street .....	39
Grace Street .....	15
Beatrice Street .....	14
Montrose Avenue .....	16
Shaw Street .....	30
Ossington Avenue .....	46
Concord Avenue .....	33
Delaware Avenue .....	54
Hallam Street .....	9
Shanley Avenue .....	5
Dovercourt Road .....	9
Dewson Street .....	5
Harbord Street .....	38
Havelock Street .....	18
McPherson Avenue .....	21
University Crescent .....	8
Crawford Street .....	10
Arthur Street .....	42
Markham Street .....	33
Albany Avenue .....	27
Lippincott Street .....	26
Total .....	764

BELL TELEPHONE UNDERGROUND WORK FOR YEAR ENDING  
DECEMBER 31ST, 1908.

	Conduit.	Duct.		
	Ft.	In.	Ft.	In.
Queen Street, from Sorauren to King .....	1,375	6	12,795	6
Queen Street, branches from Sorauren to King.....	559	2	1,771	10
Poplar Plains Road, Cotttingham to Dupont.....	1,013	6	4,434	
Dupont Street, Huron to Davenport Rd.....	577	6	2,887	6
Dupont Street, branches from Huron to Davenport Rd	271	9	684	3

		Conduit.	Duct.
		Ft. In.	Ft. In.
Poplar Plains Rd., branches from Cottingham to Du-			
pont Street .....	417 6	835	
Front Street, from Sherbourne to Cherry.....	2,345	14,070	
Front Street, branches from Sherbourne to Vine....	838	1,676	
Eastern Avenue, branch opposite Don Driveway....	115	230	
Victoria and King, branches into Royal Bank.....	284	852	
Huron Street, branches at Willcocks, Sussex and			*
Bloor .....	454 6	1,519	
Queen Street, from Leuty to Woodbine Avenue.....	2,460 6	22,496	
Queen Street, branches from Leuty to Woodbine....	1,322 6	2,761	
Bloor Street, from Brunswick to Bathurst.....	989 6	8,905	
Bloor Street, branches from Brunswick to Bathurst..	461 6	1,959	
Yonge Street, from Roxborough E. to Woodlawn....	2,280 6	17,714	
Yonge Street, branches from Roxborough E. to Wood-			
lawn .....	798 6	1,707 6	
Bloor and Brunswick Avenue branch .....	106 3	212 6	
Howard and Parliament branch .....	575 9	2,113	
Beaty Avenue, branch crossing Queen Street.....	179	358	
Roncesvalles Avenue, from Queen Street north.....	487	3,704	
Roncesvalles Avenue, branches from Queen St. north	63 6	190 6	
Callendar Street, branch from manhole on Queen and			
Wilson .....	76	152	
	18,051 11	105,027 7	

CONCRETE MANHOLES CONSTRUCTED BY THE BELL TELEPHONE COMPANY DURING 1908.

On Queen Street, from Sorauren to King .....	3
On Poplar Plains Road, from Cottingham to Dupont .....	3
On Dupont Street, from Huron Street to Davenport Road.....	3
On Front Street, from Sherbourne to Cherry .....	5
On King Street, from Victoria to Royal Bank.....	2
On Queen Street, from Leuty Avenue to Woodbine Avenue.....	8
On Bloor Street, from Brunswick to Bathurst .....	2
On Yonge Street, from Roxborough E. to Woodlawn Avenue.....	7
On Howard and Parliament .....	1
On Roncesvalles Avenue, from Queen Street north .....	2

36

*Enlarged Manholes—*

At Bloor and Huron Streets .....	1
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## TORONTO ELECTRIC LIGHT CO.

TILE CONDUIT, 1908.

Street.	From.	To.	Lineal Feet of Conduit.	Duct Ft.
Elizabeth w.s. ....	Foster Place....	Grenville ....	2,751 0	30,852
Grenville, n.s. ....	Elizabeth ....	Surrey Place ...	144 6	1,734
Surrey Place, w.s. ....	Grenville ...	St. Albans ....	1,025 0	12,300
Queen's Park, w.s. ....	St. Albans ...	Bloor ....	2,394 6	28,732
Bloor Street, s.s. ....	Queen's Park ..	Bedford Road ..	861 0	10,332
Bedford, e. & w. ....	Bloor .....	Davenport ....	2,417 0	29,004
Davenport, s. & w. ....	Bedford .....	Power House ..	1,733 0	20,796
Queen Street, s.s. ....	Elizabeth ....	Bay ....	559 0	6,708
Bay Street, e.s. ....	Wellington ...	Front ....	512 0	12,288
Shaw Street ....	Defoe .....	King ....	528 0	6,336
King Street ....	Shaw .....	Mowat....	3,022 6	36,270
Mowat ....	King .....	Liberty ....	764 6	9,174
			16,532 0	204,526

## TORONTO ELECTRIC LIGHT CO.

IRON CONDUIT, 1908.

Street.	From.	Lineal Feet.
Beverley and D'Arcy .....		128
Victoria and Shuter.....		80
Tranby Avenue.....	Bedford Road east .....	710
Elgin Avenue.....	Extension s. and e. ....	216
Major Street .....	s. of Lowther to n. of Bloor .....	324
	Total.....	1,450 feet

Respectfully submitted,

J. D. SHIELDS,

*Assistant Engineer.*

# Report of Assistant Engineer in Charge of Intercepting Sewer and Other Special Works.

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CITY ENGINEER'S DEPARTMENT,  
Toronto, December 31st, 1908.

MR. C. H. RUST,  
*City Engineer.*

DEAR SIR,—Herewith I present report of the work carried on and executed under my supervision for the year ending December 31st, 1908.

## GENERAL.

The work executed by this department has been divided for the sake of convenience under the following headings:—

1. Main Drainage Works.
2. Viaduct.
3. Sea Wall at Exhibition Grounds.
4. Sea Wall between Indian Road and the Humber River.
5. Designs, Estimates and other Special Works.

### 1. MAIN DRAINAGE WORKS.

Under this heading is included the preliminary calculations and general consideration of the whole scheme of collecting and treating the sanitary sewage of the City by means of intercepting sewers and septic tanks located in the eastern part of the City; a careful and more detailed study of the High Level Intercepting Sewer; and the laying out of different grades, and the preparing of specifications and contract plans for that portion between Jarvis Street and a point near the Don Esplanade, along Duchess, Ontario, Sydenham, Sackville and St. David Streets, Wyatt Avenue and Mark Street.

The tenders for this work were called for on December 15th, but the date was postponed.

Preparatory to fixing definitely the precise location of this sewer, a large number of borings were made along its route, and the considera-

tion of the future population and the acreage of the City and the probable water consumption were discussed: the sewer being designed to include the dry weather flow of the whole City north of its location, allowing for maximum growth during the next 25 years.

As a means of checking the volume of sewage at the present time with the measured volume of 1891 and 1900, gaugings were made during the months of October, November and December. Comparisons between the volume of sewage in 1891, 1900 and 1908 appear in the appendix. It will be noticed that the dry weather flow of 1891 was roughly, 75 gallons; of 1900, 109 gallons; and of 1908, 73 gallons per head per day. The high results obtained in 1900 were, no doubt, owing to the time of the year in which the gaugings were made and the presence of a great deal of subsoil water in the sewers. I would also point out that the fluctuation between midnight and noon is much greater in 1908 than in other years.

The methods of gauging were similar to that pursued in 1891 and 1900, and apparatus of similar character was used. The formula used for the calculation of the volumes was also identical, and there can be no discrepancy between the results of 1891, 1900 or 1908, on the scores either of apparatus or calculations.

For that portion of the City between Bay Street and Cherry Street, it was thought advisable to measure the sewage at Front Street, so that the information could be utilized in the design of the Low Level Sewer, which we now have in hand.

The gaugings of 1900 were made along Esplanade Street, and an appropriate amount of sewage has been allowed for the district between Front Street and the Esplanade, as well as the quantities for the small districts near the Don and at the eastern end, which we were not able to gauge.

A photograph of the apparatus used at the Rosedale Creek Sewer is included.

## 2. VIADUCT.

Under this heading is included the separation of grades between the Logan Avenue Crossing of the G. T. Railway and the Queen Street Crossing of the C. P. R., G. T. R. Belt Line and C. N. Railway at the east end, and Bathurst Street at the west end.

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In connection with the above were associated Mr. W. F. Tye, of Montreal, Mr. F. L. Sommerville, of Toronto, and Mr. Isham Randolph, of Chicago, as consulting engineers.

At the instance of the Board of Railway Commissioners plans were prepared in this office of the elevation of tracks in the districts mentioned above, the existing streets being carried beneath the tracks at the present level. These plans were submitted to the Dominion Board of Railway Commissioners at the latter end of March, and were proved before the Board at its sitting in Toronto in May.

Immediately following this, borings throughout the entire districts were taken by the Railway Companies to supplement knowledge already at hand. The City was represented by this department in this work.

The Commission sat again in December and considerable work was done by this department, in preparing details, supplementary estimates and other information requested by the Corporation Counsel. On the 31st of December a draft order was made by the Board of Railway Commissioners ordering the Railway Companies to elevate four tracks along the water front between York and Cherry Streets.

A large amount of office work, in making plans, estimates, surveys, etc., was done in this connection in the carrying out of this case to the point attained at the conclusion of the year.

The feasibility and advisability of the construction of bridges over the Esplanade, for the carrying of vehicular and pedestrian traffic over the tracks along the water front, were also involved in the argument before the Board.

These bridges were planned by the Railway Companies to begin at or near Front Street on the north side, and after crossing the tracks, descending toward the Bay on obtainable grades. In view of the manifest injury to lake-borne traffic, and the extra rise and fall due to the bridges, this department made a series of experiments to show the relation of tractive effort to loads on various grades.

These experiments were made as complete as the time at our disposal would permit, and besides having in view the tractive effort for different grades, different classes of pavement were selected in order that each pavement could be classified to determine its individual efficiency.

Before continuing with figures determined by ourselves I wish to insert a table of results of exhaustive experiments on English roads by Gayffier and Parnell in 1892. These results are summarized as follows:

(Calling a load drawn on a level equal to 100).

On a rise of 1 in 100 or 1 per cent. grade a horse can draw only 90.			
" 1 in 50 or 2 "	"	"	81.
" 1 in 40 or 2.5 "	"	"	71.
" 1 in 30 or 3.3 "	"	"	61.
" 1 in 26 or 3.85 "	"	"	54.
" 1 in 20 or 5 "	"	"	40.
" 1 in 10 or 10 "	"	"	25.

This information is furnished in various engineering hand-books and certain empirical formulae have been given, showing the resistance of carriages, etc., on roads depending on velocity, diameter of wheel and load. These formulae are, however, of the most general kind, and the different classes of pavements are not recognized.

The experiments which are tabulated here were made in May and are confined to the following pavements, viz., cedar blocks, treated blocks, granite blocks, asphalt, bitulithic and brick, and were made in both wet and dry weather. Unfortunately, however, no experiments have been made during freezing weather, so that in this respect the results are incomplete.

From inspection of the notes and curves plotted it would be noticed, first, that the traction increased with the grade at a uniform rate, a straight line formula being applicable to the curves. At the same time, while the traction on cedar block, treated block, bitulithic and brick increased approximately at the same rate, the traction on granite block increased much more rapidly. Owing to the nature of the asphalt pavement it was impossible to get good results during fine weather, as the traction increased suddenly on the same grade with the increased power of the sun and the heat of the day. The results for asphalt, therefore, were very unsatisfactory during warm weather, but the tests of that pavement on wet days when the pavement was cool showed uniform and satisfactory results. The pavement offering the least resistance on each grade was found to be the brick pavement; with treated block and bitulithic about even for second place. Cedar block comes next, and lastly, the granite block, although for grade less than 1½% the granite block pavement is superior to the cedar block.

All experiments were taken with a good steady team of horses harnessed to a lorry which carried a weight of  $4\frac{1}{4}$  tons. The dynamometer used was the standard form manufactured by the Canadian Fairbanks Company, and the greatest load indicated by the dynamometer during steady pull was about 1,050 pounds. The starting pull, however, rose in some cases to between 1,200 to 1,500 pounds.

During wet weather when pavements having fairly steep grades were at all slippery the horses had some difficulty in keeping their feet under the load. This was noticed most particularly on the treated block pavement of York Street Bridge. The following curves summarize the experiments for each class of pavement. The data from which the curves are plotted are given in the appendix.

It is, of course, necessary in dealing with the various classes of pavement to take into consideration the provision of an adequate foothold for horses, and on this account it is worthy of notice that in connection with granite block pavement, while the tractive effort is higher than on other pavements, the foothold afforded is possibly much better.

As a specific instance from the tables, take Church Street. In this case the cedar block pavement is in a fair condition, and the grade ranges from 1.5% to 6%. Taking the pull required to keep the vehicle in motion at 330 pounds on the level, it will be seen that it requires three times the force to continue the load up the 6% grade. No such general figures as given by Gayffier and Parnell can be given for each of the different classes of pavement discussed herein, but each class of pavement has been worked out by itself, and the results obtained have shown that for any given pavement the increment of tractive effort is uniform, and a simple straight line formula can be applied to each class of pavement. These formulae are appended hereto.

Let  $Y =$  the tractive effort required in pounds.

Let  $X =$  the per cent. of gradient for which it is desired to ascertain the tractive effort.

*For Dry Weather.*

$$\begin{aligned} \text{For Brick Pavement} & \dots Y = 200 + 103.3 X \\ \text{For Treated Block} & \dots Y = 270 + 100 X \\ \text{For Bitulithic} & \dots \dots Y = 240 + 110 X \\ \text{For Cedar Block} & \dots \dots Y = 350 + 111.6 X \\ \text{For Granite Block} & \dots Y = 260 + 174 X \end{aligned}$$

*For Wet Weather.*

For Treated Block . . . Y = 230 + 120 X  
For Bitulithic . . . . . Y = 200 + 96 X  
For Cedar Block . . . . . Y = 420 + 103.3 X  
For Asphalt . . . . . Y = 320 + 80 X

**3. SEA WALL AT EXHIBITION GROUNDS.**

I am pleased to report that the sea wall in front of the Exhibition Grounds is completed between Dufferin Street and the old wall in front of the New Fort. The progress at the site of the work was slow, due to a great deal of poor weather and the exposed position, but during the fine months of May, June, July and August the work progressed much more favorably. In all 163 cribs were placed, giving a total of 2,714 feet in length.

The filling behind the wall is composed of street cleanings and garbage, topped with earth brought down from Lansdowne Subway, and from other excavations. About one-third of the total distance behind the wall is already filled, and will be ready for grading as soon as it is sufficiently settled.

**4 SEA WALL BETWEEN INDIAN ROAD AND HUMBER RIVER.**

This wall was begun on the 16th of September. The structure will extend from a point opposite Indian Road westerly fifteen hundred feet. The form of construction adopted by the Board of Control was an alternative design submitted by the Park Commissioner, calling for stone filled cribs resting on sand, gravel and boulders, and surmounted by a mass concrete wall, placed on stone ballast.

Two lines of timber cribwork at right angles to the shore between the shore and the site of the wall, and three cribs of forty-two feet each in length are placed, but no concrete has yet been placed. The balance of the cribs is now about completed at the contractor's yard and will be ready to be sunk when the spring opens up. Although no observations respecting the stability of the wall are yet possible, I would strongly urge that this type of wall be discontinued in future extensions of this project.

**5. DESIGNS, ESTIMATES AND OTHER SPECIAL WORKS.**

Designs and estimates were prepared or are in course of preparation for several structures, among which is a reinforced concrete arch bridge over Beatrice Street on line of Harbord Street extension, and suggested

designs for highway bridges for the depression of the Grand Trunk tracks at Dufferin, Dunn, Jamieson and Dowling Avenues in Parkdale.

In the month of April and May a small amount of shore protection work was done near the groynes at Simcoe Park, which were built near the end of the preceding year. The construction of the groynes were advantageous to a certain extent, but did not extend the shore line as far as it was hoped would do. The extraordinary high water of the early spring and summer probably had considerable effect on the whole shore line, and it is yet too early to judge the benefits accruing from the construction of these groynes in 1907. The high water was also responsible for the coast erosion at the foot of Lenty Avenue, and points in that vicinity. Temporary shore protection work was placed there in April. Several estimates were made at different times of shore protection and different schemes for sea walls and boulevards throughout the whole distance between Bathurst Street and the Humber River.

Respectfully submitted,

A. C. D. BLANCHARD.

*Assistant Engineer.*

REPORT OF ASSISTANT ENGINEER IN CHARGE OF INTERCEPTING SEWER  
AND SPECIAL SURVEYS.

APPENDIX I.

RESULTS OF MEASUREMENT OF TRACTIVE EFFORT IN MOVING LOADS ON PAVED STREETS.

*Pavement—Treated Block.*

Observations made May 12th, 1908.

Load— $4\frac{1}{2}$  tons.  
Lorry—2,710 lbs.  
Team—2,940 lbs.

Street.	Distance.	Grade	Wet		Dry		Remarks.
			Starting Pull.	Average Pull.	Starting Pull.	Average Pull.	
Nelson	John to Simcoe .....	None	1,900	250	1,200	240	Good condition.
Court	Church to Toronto .....	.18	910	225	1,100	290	" sticky when dry
Wellington	Yonge to Bay .....	.44	1,000	266	1,200	325	" "
York Street Bridge	350 ft. south from Front	4.6	1,200	300	1,200	725	Fair condition—greasy when wet.
North Approach	100 ft. from east end .....	5.0	1,200	800	1,200	800	Good condition.
South-west Approach.	Station to Front .....	5.1	1,400	800	1,200	690	Good condition.

*Pavement—Cedar Block.*  
Load— $4\frac{1}{4}$  tons,  
Lorrie—2,710 lbs.  
Team—2,940 lbs.

Observations Made May 13th, 1908.

Street.	Distance.	Grade.	Wet.		Dry.		Remarks.
			Starting Pull.	Average Pull.	Starting Pull.	Average Pull.	
Logan Avenue. ....	300 ft. s. of Queen .....	.58	.....	.....	1,200	420	Good condition.
	300 ft. s. to 800 ft. s.	1.06	.....	.....	.....	475	"
Queen.....	800 ft. s. to 1,100 ft. s.	.57	.....	.....	.....	400	"
Queen.....	1,100 ft. s. to 1,700 ft. s.	.25	.....	.....	.....	350	"
Queen.....	1,700 ft. s. to 2,100 ft. s.	.62	.....	.....	.....	415	"
Gerrard Street. ....	Bridge to River St.	1.36	.....	.....	1,500	500	"
	140 ft. to 240 ft. west ..	2.44	.....	.....	.....	650	"
	240 ft. to 340 ft. west ..	3.21	.....	.....	.....	675	"
	340 ft. to 440 ft. west ..	3.78	.....	.....	.....	750	"
	440 ft. to 550 ft. west ..	3.8	.....	.....	.....	800	"
	550 ft. to River.....	.65	1,100	500	1,400	400	"
Church Street. ....	100 ft. from Esplanade..	1.85	.....	600	.....	500	"
	100 to 200 ft. north .....	4.3	.....	850	.....	800	"
	200 ft. to 300 ft. north ..	6 0	.....	1,050	.....	1,000	"
	300 ft. to Front Street..	.....	.....	.....	.....	.....	"

*Pavement—Granite Block.*

Esplanade Street . . . . .	500 ft. w. Berkeley . . . . .	1	1	.....	.....	1,200	280	Good condition.
	500 ft. to 1,000 ft. w. . . . .	1	1	.....	.....	.....	270	"
	1,000 ft. to 1,500 ft. w. . . . .	1	1	.....	.....	.....	210	"
	1,500 ft. to 2,000 ft. w. . . . .	25	25	.....	.....	.....	260	"
	2,000 ft. to 2,500 ft. w. . . . .	25	25	.....	.....	.....	240	"
	2,500 ft. to 3,000 ft. w. . . . .	25	25	.....	.....	.....	210	"
	3,000 ft. to Scott St . . . . .	25	25	.....	.....	.....	225	"
Lane 1st east Simcoe off Wellington . . . . .	200 ft. . . . .	1.3	900	425	.....	1,100	750	Good condition.
Yonge Street . . . . .	{ 100 ft. n. from Esplanade 100 ft. n. to 200 ft. n. . . . .	2.4 5.0 4.4	..... ..... .....	..... ..... .....	.....	1,200	950	Very rough.
(Esplanade to Front) (	200 ft. n. to 300 ft. n. . . . .					.....	1,000	

Load—4½ tons.  
Lorry—2,710 lbs.  
Team—2,946 lbs.

## Pavement—Brick.

Observations made June 4th, 1908.

Street.	Distance.	Grade	Dry			Remarks.
			Starting Pull.	Wet Starting Pull.	Average Pull.	
Dundas... (Queen to Arthur)	400 ft. n. Queen .....	1.06	No results recorded on this pavement in wet weather.	1,000	290	Good condition.
	400 ft. n. to 800 ft. n. Queen .....	.87	.....	.....	300	"
	800 ft. n. to 900 ft. n. Queen .....	1.25	.....	.....	350	"
	900 ft. n. to 1,000 ft. n. Queen .....	1.09	.....	.....	300	"
	1,000 ft. n. to 1,100 ft. n. Queen .....	2.41	.....	.....	350	"
	1,100 ft. n. to 1,400 ft. n. Queen .....	2.60	.....	1,000	400	"
	1,400 ft. n. to 1,600 ft. n. Queen .....	2.75	.....	.....	475	"
	1,600 ft. n. to 1,900 ft. n. Queen .....	2.16	.....	.....	400	"
Queen St. Subway... (West, Grade)	200 ft. east of Dufferin, 100 ft. west of Dufferin, 100 ft. w. to 200 ft. w. Dufferin, .....	4.58	.....	900	200	"
	200 ft. w. to 300 ft. w. Dufferin, .....	4.2	.....	.....	700	"
	300 ft. w. to 400 ft. w. Dufferin, .....	3.95	.....	.....	7.0	"
Close Avenue... (Springhurst to King)	400 ft. n. Springhurst .....	1.85	.....	900	450	"
	400 ft. n. to 600 ft. n. .....	3.35	.....	.....	520	"
	600 ft. n. to 800 ft. n. .....	2.25	.....	.....	450	"
	800 ft. n. to 900 ft. n. .....	1.3	.....	.....	400	"
	900 ft. n. to 1,200 ft. n. .....	.9	.....	.....	300	"
			.....	.....	275	"

Load— $4\frac{1}{4}$  tons.  
Lorry—2,710 lbs.  
Team—2,940 lbs.

## Pavement—Bilithic.

Observations made May 13th and 14th, 1908. \*

Street.	Distance.	Grade.	Wet.		Dry.		Remarks.
			Starting Pull.	Average Pull.	Starting Pull.	Average Pull.	
Main Avenue . . . . .	200 ft. w. Carlaw	1.09	.....	.....	1,290	370	Good condition.
	200 ft. w. Pape to 300 ft. west . . . . .	1.5	.....	.....	1,200	400	
	100 ft. w. Pape to 200 ft. west . . . . .	3.0	.....	.....	1,300	575	
	100 ft. w. Pape . . . . .	4.0	.....	.....	1,400	676	
	100 ft. from Floor . . . . .	.73	1,200	275	.....	.....	
	100 ft. n. to 200 ft. n. Floor . . . . .	.2	.....	.....	200	.....	
Park Road . . . . .	200 ft. n. to Bismark	.3	.....	.....	250	.....	Good condition.
	100 ft. w. from Park Rd	3.4	.....	.....	375	.....	
	100 ft. w. to 200 ft. west	3.1	.....	.....	450	.....	
	200 ft. w. to 300 ft. . . . .	.73	.....	.....	575	.....	
	300 ft. w. to 500 ft. . . . .	1.32	.....	.....	390	.....	
	500 ft. w. to 550 ft. . . . .	.16	.....	.....	200	.....	

*Pavement—Asphalt*

Observations made May 14th and 18th, 1908.

Load— $4\frac{1}{2}$  tons.  
 Lorry—2,710 lbs.  
 Team—2,940 lbs.

Street.	Distance,	Grade.	Wet.		Dry.		Remarks.
			Starting Pull.	Average Pull.	Starting Pull.	Average Pull.	
Yonge Street . . . . .	Cumberland to Yorkville	.2	1,300	325	1,400	400	Badly worn.
	Agnes to Edward . . . . .	.37	1,300	330	1,400	520	Good condition.
	Edward to Elm . . . . .	.75	1,400	360	1,500	600	Good condition.
	Davenport to Collier . . . . .	1.00	1,400	425	1,400	480	Poor condition.
	180 ft. n. of Severn . . . . .	2.60	1,400	500	1,400	650	Poor condition.
	McGill to Carlton . . . . .	2.47	1,200	530	1,500	710	Good condition.
	Carlton to Wood . . . . .	2.65	1,400	540	1,450	760	Good condition.
	100 ft. e. Broadview . . . . .	4.0	.....	.....	1,500	650	Good condition.
	Logan Avenue to Howland . . . . .	1.6	.....	.....	1,400	500	Good condition.

# Accountant's Statement of Expenditure for 1908

ACCOUNTS.	\$	c.	\$	c.	\$	c.
<b>GENERAL WORKS.</b>						
Asphalt repairs .....	21,266	32				
Bridges, repairs and maintenance.....	16,752	26	Including C bridge, Riv erdale Park footbridge Plains Road		Crawford St. and Poplar culvert.	
Dredging slips.....	6,998	25				
Engineering and expenses.....	\$41,424	62				
Less transfers credited.....	7,639	82				
Esplanade, docks, wharves, etc.....	33,784	80				
Express and cabmen's shelters.....	3,833	24				
General purposes.....	206	93				
Water for flushing sewers..	10,000	00				
Level crossings .....	36,350	25				
Maintenance of lavatories.....	7,948	36				
Permanent crossings.....	3,123	36				
Private drains.....	3,026	26				
Roadways .....	58,530	42				
Sidewalks.....	52,721	06				
Sand pump No. 1—maintenance.....	14,624	81				
Sand pump No. 2—maintenance.....	8,618	21				
Snow cleaning, crossings and channelling.....	12,071	80				
Stone for House of Industry.....	16,470	39				
Street tablets and house numbering.....	1,092	28				
Track repairs.....	1,977	96				
Tug "National," maintenance.....	164,700	06				
Weed cutting.....	2,575	14				
	829	89				
			467,502	05		
Less amounts paid Treasurer for private drains .....	66,002	08			401,499	97
<b>SPECIAL WORKS.</b>						
Asphalt plant.....	3,136	66				
City yard, Delaney Crescent .....	241	71				
City yard, Reid Street.....	1,397	95				
De Grassi Street sewer—enlargement.....	1,621	20				
Don straightening and Ashbridge's Bay improvements.....	66,944	41				
<i>Carried forward</i> .....	72,341	93			401,499	97

ACCOUNTS.	\$	c.	\$	c.	\$	c.
<i>Brought forward.....</i>	72,341	93	401,499	97		
Eastern entrance of railways and viaduct.	8,805	96				
Electrical power distribution plant. ....	4,407	11				
Jones Avenue culvert. ....	738	25				
Lake Shore Road repairs. ....	9,600	07				
Lake Shore sidewalk reconstruction. ....	1,801	09				
Lake Shore rubble wall. ....	6,137	16				
Lansdowne Avenue subway. ....	27,746	31				
Leslie Street sewer. ....	12,535	34				
New public lavatories. ....	5,951	42				
Princess Street yard. ....	10,197	42				
Reconstruction of track allowance. ....	40,434	00				
Rentals—St. Andrews yard. ....	739	00				
Sea wall, in front of Exhibition Grounds. ....	14,512	54				
Sea wall, Indian Road to Humber. ....	12,131	89				
Sewage disposal and water filtration. ....	1,288	11				
Sidewalks in front of City properties—						
Augusta Ave., w.s., Denison Square to						
Bellevue Place. ....	207	07				
Bathurst St., e.s., Nassau to Roseberry	586	65				
Broadview, w.s., 29 ft. n. Gerrard to						
811 ft. n. ....	810	69				
Caer Howell, n.s., Simcoe to University	134	99				
Dufferin St., w.s., Opp. Kent School. ....	419	25				
James St., w.s., Queen to Albert. ....	547	81				
King St., s.s., Dufferin to Mowat. ....	256	10				
Roseberry Ave., n.s., 150 ft. e. Bath-						
urst to 184 ft. further e. ....	250	53				
St. Patrick St., s.s., Bathurst to Ryerson	422	46				
Winchester St., n.s., Sumach to 423 ft.e.	309	00				
Gerrard St. curb, s.s., Seaton to Ontario. ....	76	01				
Simcoe Park groynes. ....	2,276	75				
Snow cleaning, sidewalks. ....	11,867	64				
Street railway matters. ....	314	04				
Testing machine. ....	1,303	81				
Trunk sewer. ....	153,213	94				
Wallace Avenue footbridge. ....	417	65				
Winchester Street repairs, Sumach to						
Danforth. ....	4,430	35				
<b>ISLAND COMMITTEE WORKS.</b>			408,212	34		
<i>Under the charge of the City Engineer.</i>						
Bridge repairs. ....	204	50				
Chippewa Avenue channel and roadway. ....	2,244	60				
New engine, Island pumping station. ....	3,515	75				
Sidewalks, bicycle path, etc. ....	4,444	33				
Water works, Island station. ....	5,192	27				
<i>Carried forward.....</i>	15,601	45	809,712	31		

ACCOUNTS.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i> .....	15,601	45	809,712	31		
Wharf repairs, including Ward's Island wharf. ....	213	00			15,814	45
LOCAL IMPROVEMENT WORKS.						
Pavements.....	809,965	05				
Curbs.....	26,146	80				
Sidewalks : Concrete.....	\$264,304	39				
Brick.....	1,227	32				
Wooden.....	1,474	80				
	267,006	51				
Sewers. ....	119,504	22				
Street openings, gradings, etc .....	73,392	79				
Railway pavements .....	19,231	79				
	1,315,247	16				
					2,140,773	92

Respectfully submitted,

WM. McCARTNEY,  
*Accountant.*

ACCOUNTS.	\$	c.	\$	c.	\$	c.
<b>WATER WORKS BRANCH.</b>						
<i>Maintenance.</i>						
Maintenance and distribution.....	49,775	30				
Main pumping station.....	56,094	39				
" " coal.....	50,804	22				
Meter and machine shop .....	13,952	10				
Store house .....	2,360	70				
Hydrants and valves .....	6,533	67				
Cartage .....	8,110	48				
High level station .....	17,311	75				
Reservoir .....	8,184	83				
Miscellaneous .....	100	00				
Electrolysis .....	462	74				
			213,690	18		
<i>Construction.</i>						
House services .....	75,169	98				
Less credits paid Treasurer.....	16,265	79				
			58,904	19		
<i>Renewals.</i>						
House services .....	5,241	84				
Short lengths extra fire hydrants .....	2,270	32				
Dead ends .....	227	17				
			7,739	33		
<b>SPECIAL SERVICES.</b>						
Tunnel and connections .....	211,985	41				
High pressure fire system .....	88,890	66				
Water filtration .....	2,062	92				
New meters .....	4,076	38				
High level station, new engine No. 3 .....	19,168	78				
" " No. 4 .....	9,303	50				
Main pumping station, new engine No. 7 .....	33,907	25				
<i>By-law No. 4982.</i>						
20-in. main, Bathurst to Roncesvalles.....	76,937	22				
20 and 16-in. mains, St. George westerly .....	78,348	64				
16 and 12-in. mains, Rosedale, Yonge to Glen Road .....	11,793	76				
12-in. main, Spadina Ave .....	16	75				
12-in. main, Strachan Ave .....	87	17				
12-in. main, Queen, Kingston Road to e. City limits .....	874	14				
<i>Carried forward</i> .....	537,452	58	280,333	70		

ACCOUNTS.	\$	\$	\$	c.	\$	c.
<i>Brought forward.....</i>	537,452	58	280,333	70		
12-in. main, Queen, Broadview to Leslie..	2,447	06				
12-in. main, Gerrard, Leslie to east City limits .....	314	50				
12-in. main, Danforth, Broadview to east City limits .....	4,388	55				
12-in. main, Symington, Bloor to Royce..	7,333	51				
12-in. main, Roncesvalles, Queen to Dun- das .....	15,283	35				
12-in. main, Lansdowne, Queen to Rideau	6,183	21				
8-in. main, Exhibition Grounds, Manufac- turers' Bldg .....	1,726	15				
6-in. main, Arthur-Shaw connection .....	408	36				
6-in. main, Greenwoods, Danforth to 470 ft. south.....	43	31				
6-in. main, Kippendavie, Queen to 700 ft. south .....	47	57				
6-in. main, Galt Ave., Gerrard to 850 ft. north .....	132	93				
6-in. main, Byron, Danforth to Chatham .	218	38				
6-in. main, Chatham, Byron to Green- woods .....	66	26				
6-in. main, Harbord, Bathurst to Clinton.	3,112	83				
6-in. main, Boswell Ave., 250 ft. e. Bed- ford to Avenue Rd .....	863	48				
6-in. main, Lowther Ave., Bedford Ave. to Avenue Road.....	797	98				
6-in. main, Berryman, Davenport Rd. to Avenue Road.....	824	17				
6-in. main, John, King to Queen .....	1,413	64				
6-in. main, Pearl, John to Duncan .....	562	54				
6-in. main, Pearl, Simcoe to 225 ft. west.	359	33				
6-in. main, Don Esplanade, King to 400 ft. south.....	320	91				
6-in. main, through Parkdale.....	10,808	49				
Cutting in valves under By-law No. 4982.	1,146	95				
Additional hydrants under By-law No. 4982.....	27	00				
Dead ends under By-law No. 4982.....	3,804	75				
<i>Carried forward.....</i>	609,810	39	280,333	70		
<i>Under By-law No. 4357.</i>						
Ruskin Ave., 630 ft. w. Perth to 150 ft. w.	188	71				
Edwin Ave., Ruskin to 150 ft. north.....	196	61				
Franklin Ave., Ruskin to 300 ft. north...	337	28				

ACCOUNTS.	\$	c.	\$	c.	\$	c.
<i>Brought forward.....</i>	600,810	39	280,333	70		
SPECIAL MAINS.						
Sunnyside Orphanage .....	640	90				
Lovatt Place fire main.....	373	44				
St. Andrews College .....	1	50				
Russell Hill Road, City limits to 479 ft. w.	15	70				
Farnham Ave., e. City limits to 100 ft. e.	96	48				
Clinton Ave., 600 ft. e. City limits to 300 ft. east .....	327	83				
Revenue mains .....			602,266	24		
			50,649	69		
					933,249	63

Respectfully submitted,

WM. McCARTNEY,  
*Accountant.*





TA              Toronto. Dept. of Public  
27              Works  
T7A2              Report of the city  
1908              engineer

Physical  
FADDELL S.  
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Engineering

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